

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

JUNE 1, 1945



Quercus Laurifolia

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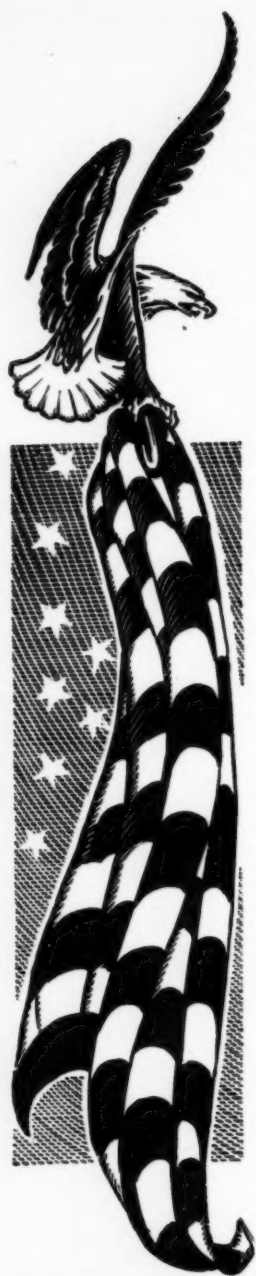
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VOL. LXXXI, No. 11

CONTENTS

JUNE 1, 1945

Eastern Natives That Sell.....	5				
By Charles H. Chesley.....					
Unusual Plants for the Midwest.....	7				
By Eldred E. Green.....					
Early Reports on Spring Business.....	9				
Some Plants You Should Know.....	13				
By C. W. Wood.....					
Repeat Sales and Good Will.....	16				
By Louis Vanderbrook.....					
Editorial.....	4	Veterans of Our Profession.....	12	Dusting vs. Spraying.....	23
—Rain, Rain!.....	4	—Ernest Hemming.....	12	Hepatica Triloba.....	24
—What Employees Want.....	4	Southwestern News.....	12	Pine Pit Scale.....	25
—Convention by Mail.....	4	Georgia Meeting.....	14	Injured Fruit Trees.....	26
Group Insurance.....	4	Insecticide Outlook.....	15	Veterans' Training.....	26
Landscaping Steps and		White-pine Blister Rust.....	17		
Wall Unit.....	6	This Business of Ours.....	18	New Books and Bulletins.....	28
Fiftieth Anniversary of		—Value of Nursery Stock.....	18	—Camellia Color Plates.....	28
New York Garden.....	6	Calcium Chloride Injury to		—Weeds.....	28
Lumber Critical.....	8	Roadside Trees.....	18	—Brooklyn Quarterly.....	28
Farm Machinery Quotas.....	8	Obituary.....	19	—Identifying Pear Trees.....	28
Manpower Controls.....	8	—Herman Charles Locke.....	19	—Starting Park Arboretum.....	28
American Association of		In the Country's Service.....	20	Tree Cavity Cement.....	31
Nurserymen.....	8	Alabama Wage-hour Bill.....	21	Old English Firms.....	31
—Emergency Labor.....	8	Announce California Associa-		New Soil Fumigant.....	32
—Disease-resistant Elms.....	8	tion Secretary.....	22	Bindweed Control.....	32
Dilution Chart.....	11	Western Tree Meeting.....	22	Fumigation Tests on	
Cover Illustration.....	11	Poinsettia Lumber.....	22	Evergreens.....	33
—Quercus Laurifolia.....	11			Champion Cottonwoods.....	34
				Report from Belgium.....	34

INDEX TO ADVERTISERS

American Bulb Co.....	26	Felins Tying Machine Co.....	31	Milton Nursery Co.....	23
American Color & Chem. Co.....	32	Forest Nursery Co., Inc.....	20	Moran, E. C.....	28
American Florist Supply.....	33	Garden Shop, Inc.....	29	Morse Co., A. B.....	34
American National Bag & Burlap Co.....	34	Gardner's Nurseries.....	17	Mount Arbor Nurseries.....	2
Andrews Nursery Co.....	21	Greenspon's Son Pipe Corp., Jos.....	30	Nalen, J. L.....	19
Ariens Co.....	30	Harrison Bros. Nurseries.....	21	National Landscape Institute.....	30
Atkins Sons, L.....	34	Heasley's Nurseries.....	17	New Amsterdam Co.....	34
Bagatelle Nursery.....	17	Herbst Bros.....	1	Pacific Coast Nursery.....	23
Bailey Nurseries, J. V.....	19	Hess' Nurseries.....	19	Peterson & Dering.....	23
Bobbink & Atkins.....	17	Hill Nursery Co., D.....	36	Pontiac Nursery Co.....	19
Boxwood Gardens.....	21	Hobbs & Sons, C. M.....	21	Portland Wholesale Nursery Co.....	23
Boyd Nursery Co.....	21	Hogansville Nurseries.....	28	Princeton Nurseries.....	17
Broadway Rubber Mig. Co.....	29	Holton & Hunkel Co.....	20	Randolph Market Nursery.....	21
Bryant's Nurseries.....	19	Horsford, Wm. Crosby.....	17	Reliance Fertilizer Co.....	28
Burr & Co., C. R.....	19	Howard-Hickory Co., The.....	28	Rich & Sons Nursery.....	22
Burton's Hilltop Nurseries.....	17	Howard Rose Co.....	23	Robinson, E. D.....	18
Campbell-Hausfeld Co.....	33	Hydroponic Chemical Co.....	32	Scarff's Sons, W. N.....	21
Carroll Gardens.....	19	Ilgenfritz' Sons Co., I. E.....	19	Schupp Florist Supply Co.....	29
Chase Co., Benjamin.....	34	Jackson & Perkins Co.....	18	Shepard Nurseries.....	17
Classified Ads.....	27	Johnston, Wm. A.....	23	Sherman Nursery Co.....	19
Cloverest Flower Farm.....	31	Kallay Bros. Co.....	19	Sherwood Nursery Co.....	22
Colby Co., Eli.....	30	Kelly Bros. Nurseries, Inc.....	21	Sizemore, Charles.....	20
Colby Pioneer Pect Co.....	32	Koster Nursery.....	17	Smith Corp., W. T.....	17
Concord Chemical Products, Inc.....	24	Krieger's Wholesale Nursery.....	21	Sneed Nursery Co.....	19
Crystal Soap & Chem. Co.....	32	LaBarr's Rhododendron Nursery.....	17	Somerset Rose Nurseries.....	28
Dayton Fruit Tree Label Co.....	34	Lake's Shenandoah Nurseries.....	19	Storrs & Harrison Nurseries.....	21
Doty & Doerner, Inc.....	23	Leonard & Son, A. M.....	29	Sudbury Soil Test Lab.....	32
Dow Chemical Co.....	30	Lindig's Mig. Co.....	32	Tennessee Nursery Co.....	15
Duke Plant Co.....	21	Lovett, Lester C.....	17	Verhalen Nursery Co.....	20
Dummett, Arthur.....	17	Maclean, Jean.....	29-31	Want Ads.....	26
Eagle Wrapping Products Co.....	32	Markham's Ohio Nursery.....	34	Wassenberg, C. F.....	18
Evergreen Nursery Co.....	19	McCarver, Johnie.....	20	Weller Nurseries Co.....	21
Fairview Evergreen Nurseries.....	19	McGill & Son, A.....	23	Westminster Nurseries.....	18
Farmers Wholesale Nursery.....	16	McHutchison & Co.....	31	Willis Nursery Co.....	15
		Meehan Co., Thos. B.....	18-34		

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AMERICAN NURSERYMAN

F. R. KILNER, Editor

Editorial

RAIN, RAIN!

Almost incessant rainfall was added to the handicaps that nurserymen faced during the month of May. In the middle west rain fell eleven days out of the first two weeks of the month, and a good proportion of the following week. As much as two inches fell in some days of May. In the first two weeks of the month only, the rainfall at Chicago measured 5.35 inches, fifty per cent above the normal of 3.50 inches for the entire month.

The wet weather has been general over the midwest and some other states. It prevented much digging of stock, but the cool weather prolonged the transplanting season. There should be adequate moisture in the ground for a good growing season if nurserymen are able to get their lining-out stock in the field.

WHAT EMPLOYEES WANT.

Every nurseryman is looking forward to the day when he can employ a full staff of men. Anticipating a boom in residential building after the war, he expects not only to welcome back the service veterans and war workers who have left his employ in the past three or four years, but also to hire additional workers. But during the time that his crew has been down to the point where he has been worried, not about what he would pay his men, but whether he would have any men to pay, changes have occurred which will affect the attitude and desires of the employees to be engaged when hostilities diminish or cease.

Some change has been wrought by the high prices paid under stress of the wartime labor shortage. Considerable change has resulted from the political emphasis on social security in its broad phase. Changes are sure to be caused by the departure from normal life and by the altered viewpoints of the young men susceptible to wartime influences.

Already it is apparent that many workers are concerned with the future, concerned enough to desert high-paying war factory jobs to return to civilian employment with a permanent aspect. They have discovered that extra money is not so important as they had thought, particularly when it cannot be spent for

better living. Perhaps the perils of wartime have enhanced their value of a comfortable civilian employment.

The talk of a guaranteed annual wage, the provisions of the so-called G. I. bill of rights, the partly forgotten benefits of unemployment compensation and the minor employment features such as retirement plans, group insurance, educational programs, recreational facilities and the like have awakened expectations. They are not likely to permit a wholesale return to the hit-or-miss type of seasonal employment which was common in agriculture before the war. Particularly is that true as regards the trained employees which the nurseryman or landscape contractor requires for the successful operation and expansion of his business.

Anyone who has given thought to this important problem realizes that no common program is available to all nurserymen. What is feasible for an employer of fifty or 100 or more employees is not practical for the nurseryman who has only five or ten or even twenty employees. Nor will the same type of program be suitable in different sections of the country; both geographical and economic influences have a bearing. The nurseryman near a large city or in an industrial community is faced with a different problem than the one who is in a small town or a distinctly rural region.

Nevertheless, each one must start thinking about what his employees will want when they return and then calculate what is within his power to provide them in the way of regular employment with a reasonably assured future.

Perhaps a moderate base pay the year around, with provisions for overtime in the busy season, will come closest to giving the employee an annual wage and enabling the nurseryman to assume no greater financial liability than he can afford. Some such arrangement comes first, because in any employment program the amount of the wages and the steadiness of the employment are the first and far most important questions.

The rest are the trimmings, whether insurance, vacations, educational programs, recreational facilities or what not. The latter are investments which the employer makes for the future efficiency of his own organization. Certainly training programs will be urgent, in view of the

undermanned situation of the nursery industry at present.

It is high time that plans be formulated in your own organization as to your postwar employment policy. That will be essential in order to attract the men you want to employ in the face of heavy competition from other civilian enterprises not many months ahead.

CONVENTION BY MAIL.

Since railroad passenger travel is expected to be more difficult, rather than less, during the next few months while soldiers from Europe are being shipped to the Pacific area, the American Association of Nurserymen will not hold its usual July convention of members. Instead, a convention by mail will be carried on, after the plan followed in 1943. Last year, it will be recalled, only a meeting of the board of governors was held at Cincinnati.

Messages of the officers and reports of committees, on the activities of the association during the past year and in prospect for the next, will be mailed in mimeographed form to reach members throughout the country daily during the third week in July. During that week, beginning July 16, the executive committee of the association will meet at the La Salle hotel, Chicago, to transact the necessary business of the organization.

GROUP INSURANCE.

Members of the New York State Nurserymen's Association are now filing census sheets to provide information for the establishment of group insurance, for the guidance of the association's group insurance committee, including Donald Brown, Jac Bulk and John Kelly. A recent amendment to the New York state insurance law now makes group insurance possible under a trustee plan. The cost of such insurance coverage will depend upon the distribution of insurance by ages, subject to reduction by dividends apportioned in accordance with the group's experience.

THE tree farm movement to perpetuate the nation's timber resources has now spread to ten states and totals 784 registered farms, covering 9,863,926 acres, the forest conservation division of the National Lumber Manufacturers' Association disclosed recently.

Eastern Natives That Sell

By Charles H. Chesley

Nurserymen who sell at roadside stands or have neighborhood businesses may well take into consideration the possibilities in selling native plants. We in the east have a number of wild plants that are worthy of consideration. These plants can also be wholesaled, to some extent, to seed houses and city stores. At this time, some of our fraternity must find new sources of revenue and probably new ways of going after business. Then, also, we have to do those things which require the least labor. Here are some suggestions regarding plants of New England which grow over a considerable part of the eastern United States.

Native plants will do best for your customers if you have adapted them to the garden before you offer them for sale. However, this is not absolutely essential. You may dig them directly from the woods and fields and pot them up for sale. Nurserymen have learned that transferring some of the wild plants to the propagating beds and keeping them for sale as needed is good insurance. Spring-flowering plants find the most favor, and those kinds which are not too common in your own locality are most likely to catch the eye of your customers.

The native hepatica, in two varieties, is one of the first spring plants in bloom. Take up large plants that have many buds showing, pot them up and place in glass frames. You can get good flowering plants a week before the wild plants are in bloom. These plants sell at city stores if placed in attractive pots. Stout paper or fiber pots or 4-inch clay pots can be used. *Hepatica americana*, or *triloba*, as some authorities have it, is the commoner species, but *acutiloba* seems to grow stronger and makes larger clumps. The principal difference is in the shape of the leaves, and it is said that the latter does not require so acid a soil as the former. We have never been able to develop dependable purple-flowered hepaticas. Some show much more color than others, but when transferred to the garden, the same plants may show pure white flowers the next year. The main point is to pot up large clumps which have many buds that will keep coming up for a period of at least two weeks. *Acutiloba*, with its 10-inch clumps of new green leaves, is a fine rock garden plant for

partial shade even when out of bloom.

Dicentra cucullaria, or Dutchman's-breeches, is one of the best of our spring natives. This or the little-different squirrel corn, *Dicentra canadensis*, is found in all sections of the east and well into the middle west. The ordinary observer would scarcely note the difference, although the latter seems to grow slightly taller. This blooms later than hepaticas, but may be treated in the same way. The attractive finely cut foliage is enough to sell the plant, even without the flowers. These two plants are similar to the well known *Dicentra eximia*, sometimes known as everblooming

eastern nurseryman has done some work in the line of perfecting a double-flowered strain. In the wild will be found some plants having twice the number of petals that the ordinary run of flowers show. It seems not improbable that this trait might be developed into full-double flowers. You can grow this plant by collecting the seeds, which ripen by July 1, and planting them immediately. Plants develop rapidly.

Few growers have had much success with the trailing arbutus. Plants can be grown from seeds, but you cannot take up wild plants and have them do much in the way of blooming. The seed crop is uncertain. Seeds ripen in June and soon fall from the plant. We have had some luck in securing new plants by selecting a vigorous plant growing in a field or pasture and clearing away the grass and leaves around it, leaving a space two feet in diameter without other vegetation. Do this when the plant is in bloom in the early spring. If any seeds from the plant ripen, they will fall to the ground and germinate in the loosened soil; so the next spring you may find a dozen plants growing around the old one. These little plants may be potted up and grown on, if you are careful about soil, drainage, water and shade. A profitable field is open to the grower who has the patience and perseverance to produce flowering plants of *Epigaea repens*.

All of the trilliums may be grown for spring sale, but you will probably find a better market if you pot these up and force them into bloom in the winter. Jack-in-the-pulpit and the various kinds of lady's-slippers will bloom in winter if they are first subjected to freezing.

While most sales are of spring-flowering plants, some which bloom in the summer and fall also have potential sales value. The native *liatris* makes a fine garden plant, and the bottle gentian is often sold with hardy perennials. You have to devise ways and means of bringing the merits of the plants to the attention of your customers. Do not expect to go out in the woods or fields and dig up any old plant and sell it. Offer an attractive growing plant, together with information on how to grow it and where it will do best, and you can sell.

One year we potted up, in 8-inch containers, a number of plants of the



bleeding heart which is native along the eastern mountains from New York to Georgia.

Wild ginger, *Asarum canadense*, is a curious plant, which can be made into an attractive pot specimen. The roots are easy to take up from their native habitat, but for the most attractive appearance the plants should be potted the preceding year. It is the curious brown flowers, hiding near the surface of the ground, which cause wild ginger to sell. A species from the southern mountains, but more or less hardy in the north, *Asarum shuttleworthii*, is nearer evergreen and in some ways more attractive. Wild ginger grows well in the ordinary moist garden, and divisions may be propagated rapidly.

Sanguinaria canadensis is the native bloodroot of the east. It is well known, but the public will still buy it. As each flower lasts but a day, it is important that plants be potted that have a number of flower buds, so that the blooming period will extend over two weeks. At least one

native pink azalea, found in some of our northern swamps. These plants were set away from direct sunlight and placed in frames and brought into bloom for Memorial day. The shrub is rather difficult to transplant, but under these conditions every one lived and every one sold at a fair price. These potted plants could be transferred to the garden with a reasonable expectation that they would live and grow. One would not sell many of such plants in a locality where the pink azalea grows abundantly in the wild. The big selling point is to select things not common; something, perhaps, that your customers have seen at some time, but cannot readily get for themselves. That which would sell in one locality might not find favor at all in another.

LANDSCAPING. STEPS AND WALL UNIT.

One solution to the problem of how to landscape artistically a steps and wall unit designed both for utility and beauty has been made by George M. Fisher, landscape architect, Lawrence, Kan., in the planting illustrated on this page. In designing the unit, considerable time was given to the study of factors not shown in these photographs, such as the relationship of the wall to the building.

The steps of concrete have considerable depth and breadth of treatment (the risers are six inches high, the treads are fifteen inches wide and the enclosing ramp or cheek blocks are ten inches wide), making the unit too wide for treatment as garden steps, but not as a public-used walk. The wall is of native limestone, with the coping of finished-off limestone.

The first photograph was taken of the newly constructed steps and wall while the planting was in progress

and shows the design of the steps, carefully rounded for safety and softness of appearance; the concrete platform leveled off from the downslope to the steps with a slight ogee curve and artistically merged with the brick walk, and the terminal pier of the wall blended into the curve, culminating in a curved section similar to that of the base of the ramp.

The shrubs used in this planting include two *Euonymus kiautschovicus* at the left of the stone pier, two Goldflame honeysuckles to the left of the steps, specimens of *Euonymus vegetus* inside the slope of the wall next to the walk, and along the wall, behind the hole shown in the first photograph, in which a *Cotoneaster divaricata* was planted, are in order *Rhamnus frangula*, Meyer's juniper and *J. scopulorum*.

The second photograph, taken in June, 1944, three years after the planting was made, shows an additional feature of the design, the original shop-made bronze lamp. A cable was installed during construction to bring in electrical power so that the lamp could be used continually at night.

FIFTIETH ANNIVERSARY OF NEW YORK GARDEN.

Two English holly trees were dedicated May 10 by representatives of the New York Botanical Garden and Rockefeller Center, Inc., in a planting ceremony for invited guests on the ninth floor garden terrace of the United States Rubber Co. building at Rockefeller Center. The trees are of the same variety known to have been grown nearly 150 years ago in the old Elgin Botanic Garden, predecessor of the New York Botanical Garden originally on the site of Rockefeller Center.

This was one of a series of events commemorating the garden's fiftieth

anniversary at the 230-acre grounds in Bronx park.

Although founded in 1895 by the Torrey Botanical Club, Columbia University and a group of leading New York citizens, the New York Botanical Garden traces its history to Dr. David Hosack, of Columbia University, who in 1801 established the 20-acre Elgin Botanic Garden on the same ground now covered by Rockefeller Center.

After the state purchased Dr. Hosack's garden in 1811, presented it to Columbia and saw it abandoned for lack of maintenance, nothing more was done about a botanical garden in New York City for two decades. Then a semicommercial garden, containing ornamental trees, shrubs, greenhouse plants and dahlias, was established at Twenty-third street and Broadway. It was not until 1888, however, that the present New York Botanical Garden was actually conceived by Prof. Nathaniel Lord Britton, likewise of Columbia University, following a trip to the Royal Botanical Gardens at Kew, England.

The New York Botanical Garden is now an institution of international reputation, visited by more than 1,000,000 persons annually. It comprises an area of 230 acres, has a library of 51,000 volumes, an herbarium of 2,200,000 pressed specimens, a museum containing a collection of 75,000 fossil plants, fifteen display greenhouses and extensive outdoor gardens. Different kinds of trees, plants and shrubs total approximately 12,000. It sponsors lectures and conducts classes in botany and horticulture, edits five publications, organizes scientific expeditions to foreign countries and conducts extensive scientific researches.

REUBEN C. RETTKE, Flint, Mich., held the formal opening of the new store display and roof garden of Rettke's Nursery & Seed Store, May 17 to 19.



Steps and Wall Unit Three Years after Planting.



Steps and Wall Unit at Time of Planting.

Unusual Plants for the Midwest

By Eldred E. Green

Many midwest nurseries could increase their sales by the addition of a suitable variety of unusual plants. Those nurseries with retail display grounds could profitably install some of these plants as living displays to promote the sale of other varieties and species not now commonly seen.

It is noteworthy that thousands of people visit certain towns and streets during the flowering season to view unusual plants. To those who have seen traffic jams around a large blooming magnolia, or who have tried to drive through Lombard, Ill., during the lilac season, or who have seen the hundreds who have flocked to the private garden of Mr. Napier, at Blue Island, Ill., during peony time, the fact is brought home that the public is interested in things out of the ordinary. Too often local sources for many of these plants have been lacking and buyers must send to other parts of the country for them.

Perhaps most lacking has been the presence of broad-leaved evergreens and their kin. These fill a need long overlooked and can do much to pep up evergreen plantings. The information here offered is presented in the hope that it will provide stimulation and a factual basis for nurseries that have a discriminating clientele.

Hardiness is one factor that is important in such a large group as the rhododendrons and azaleas. Many species come from warm regions and are unsuitable at all for outdoor culture in the midwest. Others have been hybridized with tender species and may inherit some of their tenderness; this occurs especially in some of the groups propagated from seeds. Information as to hardiness of many species and varieties can be found in the books of such men as C. G. Bowers and in the publications of the Arnold Arboretum and some of the state experiment stations. From these it is clear that many species, particularly those native in the eastern mountains and their derivatives, are hardy to 30 below zero. While hardiness involves more than resistance to low temperatures the other factors are more subject to control. The species found to be most hardy at Rochester, N. Y.; Ithaca, N. Y., and Boston, Mass., as reported by Dr. Wyman in *The Florists' Review*, September 21, 1935, are:

Rhododendrons (all with evergreen foliage):

White: Boule de Neige, Album Elegans* and Album Grandiflorum.

Purple: Purpureum Elegans, Purpureum Grandiflorum and Everestianum.

Pink: Abraham Lincoln, Lady Armstrong, Henrietta Sargent, Mrs. Charles Sargent, Roseum Elegans.*

Red: Kettledrum, Atrosanguineum, H. W. Sargent, Caractacus.

Species: Carolinianum,* catawbiense,* maximum,* minus, smirnowi. Azaleas (deciduous foliage):

Orange: Ghent hybrids (some), calendulacea,* japonica,* mollis (some).*

Rose: Nudiflora,* poukhanensis,* poukhanensis yodogawa,* schlippenbachii,* mucronulata, vaseyi.*

Red: Kaempferi.*

White: Arborescens,* viscosa.*

The varieties starred are those of which I have personal knowledge and experience. To this list of material may be added *Kalmia latifolia*, the well known mountain laurel, which has proved hardy and desirable. This list gives a good basis for starting, and the hardiness range can be determined by comparing the locality with the climate in the three places mentioned, as well as that of Chicago in the case of the ones starred. It will probably be found that much of the middle west has a climate suitable for a number, if not all, of these species and varieties.

Another factor that may have delayed use of these plants is the bogey of an acid soil. With the popularity of the cultivated blueberries and of the greenhouse azaleas, this becomes a minor point. Acid soils occur naturally in many places, and such soils can be used as is. Wherever native blueberries, cranberries, wintergreen, trailing arbutus or other heaths are found, the soil is acid and suitable for cultivated azaleas, rhododendrons and blueberries.

If not obtainable naturally, an acid soil can be easily made by mixing sand or sandy loam with about one-third its volume of peat or half-rotted oak leaves or pine needles. This should be a simple matter for most persons. However, there is one caution in making beds for acid soil plants that can best be summed up in the words of the famous Mr. Watson, of Kew Gardens, who observed, "Where beds of fresh soil must be made, the right way to do this is not to make a hole and fill it with the prepared soil, but to form a

mound large enough to accommodate the plants and to retain moisture. Much money has been spent in excavating beds and filling them with a peaty mixture. The rhododendrons will thrive in this until the lime from the surrounding soil impregnates the bed. When the soil for rhododendrons is placed above the level of the rest there is little danger of the lime affecting it."

This indicates that drainage should be away from the planting so that there will be no leaching of lime into the bed. Excavated beds can be satisfactory where this is observed. Measures should also be taken to maintain the acidity of the original soil, which will be reduced by watering with city water or through other causes. A mulch of peat, oak leaves or pine needles renewed yearly will generally prove sufficient and will aid in reducing the necessity of watering, especially if hard water is all that is available. Rain water is better and may be obtained by collecting it in cisterns or rain barrels. If hard water is used for watering only when necessary during the summer, the mulch should keep the acidity up to a satisfactory level. Where large quantities of hard water must be used, chemical means of counteracting the alkalinity must be resorted to. Applications of the acidifying agents should be made only on the basis of soil tests and only to the extent indicated.

The exposure for these plants is something to be given consideration. As with other evergreens, much damage can occur through winter burning of the foliage. This is caused by sun and wind and can be prevented by locating the plants where they will be shaded during the winter. Partially shaded situations will also be beneficial during the summer months, as some species can withstand complete shade and all benefit by midday shade during the hot weather. Suitable location adds a good group of evergreen material for use on north fronts and under large trees and shrubs. For complete shade *Rhododendron maximum* and *kalmia* may well be used. The others, while benefiting by midday shade, flower best if not completely cut off from the sun during the summer months. Shade from screen planting of conifers may also be utilized.

The handling of these plants is similar to that of conifers. They

should be lifted with a ball. This is not so difficult as with conifers, because the mass of fibrous roots near the surface holds the humus and the relatively light weight of the soil mass adds to the ease of transplanting.

It seems likely that there will be a lack of grafted varieties because of labor difficulties at present, but there are many nurseries able to supply excellent material of the native species, which would be desirable as a means of introducing relatively inexpensive plants to a new locality or for landscaping.

To sum up, many rhododendrons, azaleas and mountain laurels can be quite easily grown in parts of the midwest without more trouble than customarily used in planting other choice material. These can be used in some of the shady situations where choice of shrubbery evergreens is limited. These plants do not require much care except for keeping a mulch of humus materials. They are rather easy subjects to transplant and the price of native species is reasonable. They should be a good item wherever there are garden-minded people who are tired of the same old things.

LUMBER CRITICAL.

Lumber may be the deciding factor in the partial reconversion period now at hand, J. A. Krug, chairman of the War Production Board, has informed the lumber industry.

The direct military requirements for lumber in the European theater will increase during the period of re-employment of men and materials, and at the same time the tempo of the Pacific war will be increased, intensifying the military demand for lumber and plywood, Mr. Krug said in letters to lumber and plywood associations throughout the country.

FARM MACHINERY QUOTAS.

Quota limitations in the production of farm machinery were lifted May 17 by the War Production Board.

There are no limits on production by small machinery manufacturers, those whose total net sales of all products were less than \$500,000 in 1941, and they are not required to file production schedules or reports. Large producers, however, must obtain an approved schedule for each item of farm machinery and equipment which they plan to make after July 1 and may produce only in accordance with that schedule.

Both small and large producers are bound by other provisions of L-257-c, particularly relating to rubber tire equipment. While restrictions on making rubber-tired equipment

are retained in the new order, the list of exempted items has been expanded and now includes such items as wheel-type tractors, including the garden type; power sprayers of over ten gallons per minute, dusters, potato diggers, mowers and a considerable list of other machines.

MANPOWER CONTROLS.

Although the European phase of the war is over, general relaxation of manpower controls is not in prospect until Japan is defeated, announced Paul V. McNutt, chairman of the War Manpower Commission, last month. Plans for relaxation of controls as rapidly as circumstances permit are being put into operation, he added.

During the transition period, up to July 1, manpower controls in group III and IV areas may be lifted by area directors at any time after consultation with local management-labor committees.

But in group I and II areas the present programs will be maintained, including employment stabilization, employment ceilings, priority referral for males and the 48-hour week. Changes in those areas will depend upon the status of the labor market when workers are laid off from war production. If unemployment appears in these areas, controls will be relaxed.

After July 1 some further changes to ease the situation are expected, although the extent depends upon the classification of the labor areas by groups at that time.

NOTICE has been given by Raymond Walsh and Norman Klauder, trustees for Henry A. Dreer, Inc., Philadelphia, Pa., that a hearing will be held June 4 at 10 a. m. in the United States District court for consideration of the confirmation of the trustees' amended plan for the reorganization of Henry A. Dreer, Inc.

AMERICAN ASSOCIATION OF NURSEYMEN

RICHARD P. WHITE,
EXECUTIVE SECRETARY



636 SOUTHERN BLDG.,
WASHINGTON, D. C.

EMERGENCY LABOR.

Since the termination of the war in Europe, no announcement has been made as to the plan to bring 150,000 more prisoners of war into this country to relieve the critical farm labor situation, but the War Department has indicated that the 310,000 German prisoners of war now here will be retained until after the fall harvest, states R. P. White, executive secretary of the American Association of Nurserymen.

"Nurserymen producing food-bearing plants such as fruit trees, nut trees, bush fruits, strawberry plants, asparagus and rhubarb roots, etc., should receive the same consideration for emergency farm labor, either local, Mexican or POW's, as other farms producing other food crops. Word to this effect has gone from the U.S.D.A., War Food Administration, Labor Division, to all state extension directors.

"Adjustments to this general rule may be necessary in certain areas where there is not enough farm labor to go around. In one such area, where 15,000 farm workers are needed and with only 9,000 available, the state war manpower commissioners, the state directors of extension and the

army officials have set up some priorities of their own, dividing essential farm crops into those most critical and needed, those less critical ones and all others. Food-bearing plants produced by nurseries have been relegated to the last classification. This indicates the critical labor situation of the area."

DISEASE-RESISTANT ELMS.

After the recent serious outbreaks of phloem necrosis and the Dutch elm disease, producers of elms will want to have their seeds collected from disease-resistant sources. Elm trees immune to the Dutch elm disease are rapidly being propagated at the Dutch elm disease laboratory in New Jersey where a selection of American elm and two hybrids were found to be immune to the disease. Elm seedlings produced from old elms in Kentucky that survived an outbreak of phloem necrosis there more than fifty years ago have shown a marked resistance to that disease.

The House of Representatives has granted \$20,000 for the hybridization and selection between these resistant and immune elms to produce a desirable elm immune to both of these serious diseases.

Early Reports on Spring Business

Orders beyond their ability to fill, in the face of an acute shortage of help, transportation difficulties in some sections and unfavorable wet weather over the eastern part of the country, made the current season a satisfactory one in point of dollar volume, but one of the most strenuous and physically trying on record. Accustomed to the vagaries of the weather, nurserymen reveal optimism in their accounts of the strenuous season. The outlook appears favorable in point of demand, though shortages in some items are likely to persist for another year or more. The early reports published here are from leading nurserymen in the milder climates, where the spring season is concluded.

Busy in Pacific Northwest.

Favorable weather aided nurserymen in the Pacific northwest, and they have been busy in the face of a strong demand, reports Avery H. Steinmetz, manager of the Portland Wholesale Nursery Co., Portland, Ore., who writes:

"Nurserymen in this territory, both wholesale and retail, have had an extremely busy and, we believe in almost every case, profitable selling and shipping season.

"The demand was good in practically every line of stock, and because of favorable weather conditions, which enabled us to work almost every day from October 1 to May 1, we were able to handle a large volume with a limited amount of help.

"Shipping problems were not so great as some of us anticipated. In fact, it seems that we have eliminated some of the problems of normal times through more careful packing and handling of the orders.

"Defense industries are now releasing large numbers of men and women, many of whom will be available for agricultural work; so the nursery industry should be in better condition next season as far as help is concerned.

"It seems likely that the supply of stock will be the limiting factor for the next year or two, for production, with the possible exception of fruit trees, seems still to be less than normal.

"There is quite a boom just at the present time in some of the broadleaf evergreens, including camellias, rhododendrons and azaleas, and there seems to be a tendency on the part of a number of our growers to specialize in these items.

"It is our personal opinion that, even though general shortages will prevail for the next two or three seasons, the final result will be overproduction, which will bring about a marketing problem.

"As far as prices are concerned, there seems to be no tendency whatever to make any increases; neither does there seem to be a need for price reduction at this time; so schedules are likely to remain just about the same as during the past year."

Shipping Handicaps.

The handicaps in shipping, to meet the heavy demand, are related by Wayne E. McGill, of A. McGill & Son, Fairview, Ore.:

"The past season was an extraordinary year with us, with many hardships, and yet we managed to get through with less confusion and trouble than we have had for three or four years. In the first place, we had a very dry summer, which curtailed plant growth to a certain extent. A wet September and warm October started growth again and caused a long delay in digging, due to immature stock.

"When things were finally ready to dig in December we had a two week's freeze-up, and it was the first of the year before we got our material all out of the ground and into storage. This put us about a month behind with our work, and when we finally got ready to start shipping, the various embargoes on carloading and the use of refrigerator cars again held us up, but in spite of all of this we managed to complete our largest year's business, with all shipments under way by March 15.

"Like everyone else, we found a

heavy demand for practically all material and in most items did not have enough to take care of our late orders.

"A wet spring has delayed our field operations, but such stock as we have is growing well and we should have plenty of moisture to carry us through the summer. It is the general opinion that all items are going to be short next season, as the demand is heavy right now and, of course, the real selling season is not yet started. It certainly would be the time to have a heavy supply, but labor shortages have deterred most of the growers in this area from making any heavy plantings.

"Just what the future will bring in planting is hard to tell, but of course a heavy demand always has an inclination to make everyone plant heavier.

"For the coming year it seems to me that prices are rather stabilized as of last year, as we are getting a fair return, but we can see nothing lower, for growing costs are certainly not going down.

Worst Season in Kansas.

From the standpoint of weather, this spring was the worst on record in Kansas, preventing shipment of much stock which was in strong demand, according to J. J. Pinney, of the Willis Nursery Co., Ottawa, Kan., who states:

"The spring of 1945 was the worst season we ever encountered for filling orders. From early December up to the present time there have not been three days of sunshine in a row. The months of March and April were the wettest on record. Strange as it may seem, unfavorable weather was a greater handicap to us this year than the labor shortage.

"This condition must have been rather widespread, because our customers to whom we were not able to render our usual prompt service were very understanding and sympathetic. We are ending the season with many carloads of unfilled orders, especially evergreens.

"In general, business has been very good. Little or no resistance to prices was encountered. Many scarce items sold out early in the season. The only surplus in fruits encountered was in apples.

"The same conditions which prevented our digging made it extremely difficult for customers to plant. We think this accounts for the fact that there was a falling off in demand



for small fruit plants. This might have been partially due to extremely high prices.

"The visible supply of nursery stock in this part of the country for the next season is considerably smaller than last year. There was a poor stand of understocks last season, and the spring of 1944 was quite unfavorable for planting on account of excessive moisture and the lack of labor. Exactly the same conditions obtain this year."

Cleanup in Texas.

More favorable shipping conditions prevailed in Texas, with a banner shipping season, according to the following report from George F. Verhalen, president of the Verhalen Nursery Co., Scottsville, Tex.:

"The season's demands for nursery stock of all kinds brought us as nearly a complete cleanup of our fields as we have ever experienced. All merchantable plants were sold except possibly a small quantity of *Biota orientalis aurea nana*, and they would have gone, too, but for our early spring weather, which started them into growth, and the month-early advance spring weather in the north, as well as the embargo April 1 on the use of iced refrigerator cars which would have transported them safely.

"An increase in wages last fall brought a fair number of our old employees back to their families from the high-wage war industries on the Texas Gulf coast, so that we were able to fill orders more nearly on time than in the previous two years. Their voluntary comments have been that the high cost of living, plus the several industrial "deducts" from their pay checks, left them about the same weekly return as from us. The nursery industry being classified agricultural, they have no social security or other withholding here. But labor is getting too big a share of the income because nursery prices, on staple articles outside of roses, are largely unchanged from two and three years ago, with only a small increase on some items; nothing to compare with the increase in wages, clothing and food.

"There will be little or no increase in the supply of roses for the coming sales season, and similar high prices are already being asked for them. But we have been able to make a slightly larger planting of understocks for budding this summer and the stand is good. These will not come onto the market until 1946-47.

"Our propagation of young evergreens has gone into our own fields.

We anticipate a good demand for several years. Our new propagation of this line is being increased. There has been a big call for lining-out stock.

"We sold many thousand plants of *Ilex cornuta burfordi* Chinese holly, with its big red berries, in B. & B. sizes up to eight feet, in pots berried as a florists' Christmas item and out of pots for field planting. It appears to be all right outdoors on both sides of the Ohio river valley and north to Maryland, New Jersey and Long Island. It is the one big new thing in the nursery and florists' trade.

"The third year of our branch warehouse at Dallas serving the trade in that area finds it increasingly popular, and we are keeping it open throughout the summer this year. Here in the southwest there is little stoppage in planting, even during the first flush of soft spring growth. Besides, we have a good supply of stock coming on in receptacles for sale when they commence to bloom.

"We are devoting a large acreage of our land to war food crops."

Heavy Rains in Alabama.

The most hectic season in his long experience, on account of the incessant rains, is reported by Henry B. Chase, president of the Chase Nursery Co., Chase, Ala., who writes:

"We are really glad to see the end of the most hectic season in our experience. We don't see how we managed to get the shipments out with our very short crew and handicapped as we have been all winter, and even up to this very date, by almost incessant rains. From Christmas day until March 1 there were four days on which we could do outside work. It has been a fight to get the stock out and shipped. It has been another fight to get the plantings in. The fact is we are not yet through with our plantings and are uneasy as to the outcome of this late planted material.

"It has been here, just as it has been all over the United States, a case of 'more business than we could handle,' a constant turning down of orders because certain items were exhausted. We have just finished re-funding to 166 customers sums varying from a few dollars to more than \$100 because of remittances received with orders on which we could not furnish the entire list wanted. In a great many instances the entire check was returned because we could not furnish the items wanted.

"As to the future, we can't say a thing until we have had sufficient dry weather to enable us to clean up

the nursery and get some idea as to our production. We can't work this red clay soil when it is too wet, and, believe it or not, we have not been able to have a cultivator in the fields for two straight weeks. Here and there we can see, popping up through the weeds, what promises to be good stands on certain items and so 'Hope springs eternal.'"

Briefly and optimistically, John Fraser, of the Huntsville Wholesale Nurseries, Huntsville, Ala., summarized the situation thus:

"We have concluded a very satisfactory, although trying, shipping season and have finished our spring planting of nursery stock. It is still early to tell just what results will be, but weather has been ideal on newly planted stock. Rain has delayed cultivation and held up planting of farm crops; however, there is still plenty of time for this to be done. We expect to have our usual line to offer at wholesale, but no large surplus of anything."

Successful But Difficult.

In the face of the short season, bad weather and lack of labor, the dollar volume of business was surprisingly higher, says S. D. Tankard, Jr., secretary-treasurer of the Howard-Hickory Co., Hickory, N. C., who writes:

"Although the past spring season has been a very difficult one with us, it has been quite a successful one.

"It was the most hectic season we have had, on account of the shortage of labor, the shortness of the season and the unprecedented demand. For the first time in our history, we were obliged to refuse a great many orders, quite a number of them for material that we were anxious to sell, but could not get dug and shipped.

"We had bad weather from Thanksgiving until about the third week in February, during which time little outside work could be done. As soon as the bad weather stopped, summer weather commenced, and everything came to a head at one time, during March. We were flooded with orders, and could hardly dig and ship them on account of customers' coming to the nursery. As we have not learned how to refuse those who come, we waited on them, without being able to fill some of our bigger and better orders.

"Our labor supply was at a low ebb, but in spite of everything, our dollar volume for the spring season was above that of last year. In fact, by the end of March we had done more volume than we did by the end of April in 1944. Prices were better for fruit stock, but about the same,

[Continued on page 29.]

DILUTION CHART.

Frequently nurserymen have occasion to use small quantities of insecticides on their own jobs, and more often to advise customers with regard to the quantities of a spray or dust to use. Accuracy is important, both for economy of materials and for prevention of injury to plants from overdoses, on the one hand, or from inadequate kill of pests through underdoses, on the other.

So it is handy to have a chart indicating a quick way to arrive at the proper amounts of ingredients in small applications. On this page is reproduced an insecticide dilution chart for spray and dust mixtures recently prepared by Dr. J. O. Pepper, extension entomologist at Pennsylvania State College, who has had much practical experience with the use of such mixtures.

This is a handy chart to have in a conspicuous place on your premises, or easily accessible when you or your staff are called upon to answer the queries of customers. A reprint of this chart can be secured by readers of the American Nurseryman by sending a stamped self-addressed envelope to the editor.

COVER ILLUSTRATION.

Quercus Laurifolia.

Quercus laurifolia, the laurel oak, is native of the territory of Virginia to Florida, west to Louisiana. The mature plants are about sixty feet in height, although occasionally specimens to 100 feet high are found. The branches are comparatively slender, forming a dense round-topped head. The leaves are oblong or slight oblong-obovate, sometimes slightly lobed, dark green and shiny above and lighter green and glabrous on the underside. The laurel oak and the shingle oak, *Quercus imbricaria*, are sometimes confused. One of the best identification points is that the older leaves on *Quercus laurifolia* are glabrous on the underside, whereas those on the shingle oak are distinctly pubescent, or hairy.

The acorn of the laurel oak is short-stocked, subglobose to ovoid in outline and enclosed only at the base by the shallow cup.

Cultural requirements of the laurel oak do not differ materially from those of most of the other species. It prefers a good soil with ample moisture. Propagation is by seeds.

The laurel oak is a handsome tree, with semievergreen, glossy, thick foliage, adapted to planting as a street or lawn tree in the southern states.

L. C. C.

INSECTICIDE DILUTION CHART
FOR SPRAY AND DUST MIXTURES.

Name of material	Quantity of material for indicated amounts of water. (T = level tablespoon; t = level teaspoon.)				
	100 Gals.	5 Gals.	3 Gals.	1 Gal.	1 Qt.
Miscible oil 1-20	5 gals.	1 qt.	1¼ pts.	13 T.	3¼ T.
Miscible oil 1-25	4 gals.	1½ pts.	1 pt.	10 T.	2½ T.
Summer oil 1%	1 gal.	13 T.	8 T.	2½ T.	2 t.
Summer oil 2%	2 gals.	1 pt.	½ pt.	5 T.	4 t.
40% Nicotine sulphate dilu- tions at: 1-400	1 qt.	¾ T.	2 T.	2 t.	½ t.
1-800	1 pt.	5 t.	1 T.	1 t.	¼ t.
Pyrethrum extracts (liquid)	Use same dilutions as for nicotine above				
Calcium caseinate (spreader)	1 lb.	3 1/3 T.	2 T.	2 t.	
Soap flakes (as a spreader)....	4 lbs.	¼ lb.	12 T.	4 T.	1 T.
Paris green	1 lb.	2 T.	3 t.	1 t.	¼ t.
Arsenate of lead	3 lbs.	10 T.	6 T.	2 T.	1½ t.
Calcium arsenate	4 lbs.	12 T.	9 T.	3 T.	2 t.
Hydrated lime	5 lbs.	¼ lb.	10 T.	3½ T.	2½ t.
Soybean flour	¼ lb.	2 T.	1 T.	1 t.	¼ t.
Lime sulphur solution (win- ter strength)	12 gals.	5 pts.	3 pts.	1 pt.	8 T.
(summer strength)	2 gals.	1 pt.	½ pt.	6 T.	4 t.
Wettable sulphurs	10 lbs.	½ lb.	12 T.	4 T.	1 T.
Derris or cube root (4-5% rotenone content)	3 lbs.	18 T.	11 T.	3½ T.	1 T.
Cryolite	6 lbs.	15 T.	9 T.	3 T.	2½ t.

Table of Dilutions for Insecticidal Dusts.

Diluents	10 Lbs. 5 Lbs. 1 Lb.		
	Amounts of materials to use with diluents.		
Kinds of dust			
Lead arsenate	2 lbs.	1 lb.	4 tbs.*
Calcium arsenate	2 lbs.	1 lb.	4 tbs.
Rotenone (derris or cube roots)	2½ lbs.	1¼ lbs.	10 tbs.
Pyrethrum (ground flowers)	2 lbs.	1 lb.	4 tbs.
Cryolite	3½ lbs.	1¾ lbs.	8 tbs.
Nicotine (40% free nicotine)	1½ cups	¾ cup	3 tbs.

* tbs. = level tablespoons.

Diluents for Dusts.

Hydrated lime: Can be used with lead arsenate, calcium arsenate and nicotine. Never use it with rotenone, pyrethrum or cryolite. Probably it is best diluent for nicotine dusts.

Pyrophyllite (sometimes called Pyrax), talc, clay, Fuller's earth, gypsum, etc. These diluents can be used with any of the above-mentioned insecticides except nicotine. In very small lots such diluents as wheat flour, sulphur and finely ground tobacco may be used; however, they make a heavy dust that does not flow through small dusters easily.

VETERANS OF OUR PROFESSION

ERNEST HEMMING.

Reaching the age of 77 at the end of April, Ernest Hemming looks back upon a horticultural career of sixty-three years, some of the observations of which, he contributes in his column in this magazine, "This Business of Ours."

Born in the village of Alsager, England, one of a family of ten children, he left home at 14 to be garden boy at Donnington Rectory and continued as apprentice gardener on several famous old estates and at Dickson's nurseries, Chester.

Upon completion of his apprenticeship, he applied for admittance to Kew Gardens as a student gardener and entered in 1890. His stay at Kew gave him an impressive knowledge of plants, so that in later life it was difficult to bring him a cultivated or indigenous plant that he could not identify.

Much to his surprise and the envy of his classmates, upon leaving Kew he was offered a job on the staff of the *Gardener's Chronicle*. Because of incipient tuberculosis he left England on advice of his doctor to come to America and a better climate. He arrived in America with about \$20 and anxious to get a job to earn money to take him further west. Having a letter of introduction to Mr. Miller, of Miller & Yates, landscape engineers, who were laying out the Drexel estate, at Bryn Mawr, Pa., he got his first job in America under them.

His next job was with J. Louis Loose, a wholesale florist, at Alexandria, Va., who sent him to New York to take orders from the flower stores. Mr. Loose had introduced the cosmos to America and wanted to introduce it to the florists' trade.

Next he was with Adolf La Moul, the Lion Florist, the Bowery, New York, but he had brought with him from the Potomac swamps of Alexandria a severe infection of malaria. After he partially recovered, he was introduced to the firm of Pitcher & Manda, Short Hills, N. J., by Harry Bunyard.

His health being his first concern, he left Pitcher & Manda as soon as he had sufficient funds, to head farther west, going on to Salida, Colo., about 1892. He was there for five years, during the Cripple Creek gold rush and the fights of the railroad barons—a rugged time and a rugged country for a sick man. Even while

there he continued his horticultural pursuits, becoming gardener for the Denver Rio Grande Railroad hospital, where he regained his health.

Moving to Colorado Springs, he got a job with William Clark, wholesale and retail florist of that city. While Mr. Hemming was in Colorado Springs, the Cripple Creek gold fever infected him; he invested \$40 in gold stocks, which made him enough money for a trip home to England to see his folks.

Shortly after his return, he obtained the position of herbaceous foreman at the old Meehan Nurseries, at Germantown, Pa., and while there built their herbaceous depart-



Ernest Hemming.

ment to one of national reputation. Shortly afterward, in 1902, he married Annie J. Bushman, whom he had met on a visit to Gettysburg, and became a citizen of this country. He stayed at Meehan's twenty years, until that firm broke up as a result of World War I and the urban expansion of Philadelphia. While at Meehan's he hybridized the wild mallows and developed Meehan's Mallow Marvels, which were exhibited at the Jamestown Exposition.

After making a success of the herbaceous department, he was taken into the office as one of the managers. While there he spent two weeks of each spring and fall in visiting clients of the firm throughout the middle Atlantic states. In 1915, in addition to his regular position, he was offered the editorship of the old *National Nurseryman* and edited it during its most successful ten years, a success not repeated until it was combined with the present *American Nurseryman* in 1939, when he was induced by the present editor to contribute his present regular column.

Upon the dissolution of the old

AMERICAN NURSERYMAN

Meehan Nurseries, Mr. Hemming formed the Outdoor Arts Co., Chestnut Hill, Pa., with two others from the same firm, Edwin Mathews, another Kewite, and Louis Strassberger, a landscape engineer. Growing plants, however, was of more interest to him than selling them; so he left the Outdoor Arts Co. and joined Elliot Wheeler in forming the Canterbury Nurseries, at Easton, on the Eastern Shore of Maryland, a water-surrounded, humid land that reminded him of home. Here they grew boxwood, virtually by the million, to make up for imports cut off by quarantine 37.

Although approaching middle age when he married, he had three children, two sons and a daughter. The elder son, not particularly interested in things horticultural, became a chemist and is now chief chemist for the United States Plywood Corp. With the second son, Sam, he started the Eastern Shore Nurseries, Easton, Md., in the inauspicious year 1929. In the struggle of surviving the thirties their main interest was a modestly successful landscape business, additional activities being successful quantity propagation of the Chinese chestnut and the development of several handsome new mallows, yet a long way from general distribution.

A serious illness of several years ago forced him into virtual retirement, the business now being in the hands of his son and his son-in-law, Robert Johnston. Plants continue to be his interest, for although he can no longer grow them or sell them, he can still write about them.

SOUTHWESTERN NEWS.

R. S. Mullison, vice-president of Shenandoah Nurseries, Shenandoah, Ia., recently completed a business trip to points in Texas, Alabama and Tennessee. Most of the trip was made by air.

The J. C. Nichols Nurseries, Kansas City, Mo., suffered the loss of 100 evergreens, 100 flowering trees and 300 shrubs in April as the result of a prairie fire in a field adjoining the nursery. The loss probably would have been much heavier had it not been for a heavy downpour of rain that extinguished the flames.

Mrs. Eva Gilstrap has established a nursery business at Joplin, Mo., under the name of Gilstrap Gardens.

E. S. Welch, president of the Mount Arbor Nurseries, Shenandoah, Ia., accompanied by Mrs. Welch, made a business trip to Missouri and Kansas the latter part of May.

Ben Davis, of the Ozark Nurseries, Tahlequah, Okla., is planning to build a storage house this summer.

Some Plants You Should Know

By C. W. Wood

I have been favorably impressed by the behavior of the Springtime kniphofia during the past few years—so impressed, in fact, that I should like to call special attention to it. The combination of colors, coral and ivory with a section of ivory-yellow to bind the two, is far more pleasing than the description sounds. In the actual flower it produces a charming effect both for cutting and in the garden, where the flowers on long stems (close to three feet under good culture) in July are most attractive when planted with white flowers, such as Shasta daisies, of that season. If one had sufficient stock, I should expect the cut flowers to sell well on local markets at least. Springtime is said to belong to the hardier kinds, but of that I cannot say, for we do not trust kniphofias in the open this far north (northern Michigan). It is true that the hardiest ones go through most of our winters, but one never knows when a really cold spell will coincide with a snowless period and then even *K. uvaria* disappears.

Generally speaking, the named kniphofias sell better than a mixture, but growing plants from the seeds of a modern strain of hybrids holds much pleasure for the commercial grower, and there will be few worthless plants for the burn pile. On the other hand, there may be some worthy of naming and introduction.

The Silver Thistle.

It is well enough, I suppose, that all do not see horticultural matters alike, else gardens in turn would be much the same. Using all the tolerance of which I am capable, I still cannot see how anyone can look on the silver thistle, *Carlina acaulis*, "as more interesting than beautiful," as one reads in the literature by some. The tufts of thistlelike leaves, spiny and silvered, are ornamental in themselves. Correvon, commenting on the beauty and indestructibility of the leaves and flowers in one of his books, mentioned that the countrywomen of his country (Switzerland) like its decorative effects so well they use it as a hat ornament. The beauty of the leaf rosette is augmented by large (up to six inches across), almost stemless, silver-white heads with dark bluish stamens, which appear in July and remain decorative until winter. It all means an unusual plant, to be sure, and also one that appeals to me, at least, throughout the growing year.

Since it comes from the mountains of southern Europe, one would naturally expect it to be somewhat tender to cold and perhaps a little exacting in its demands; actually, it is neither. Here it opens under open field conditions, wind-swept and dry, without a whimper. It has, in fact, just what it is used to in nature—low wind-swept mountains in poor stony soil. It is a plant that attracts immediate attention from gardeners and one that is not apt to disappoint by sulking, provided it is moved before it becomes too old and is given a well drained soil in the sun.

Heleniums.

Several years ago I remarked in these columns that I considered heleniums the most useful of all autumn flowers. I thought at the time that the remark would stir up objections among the proponents of fall asters at least, but was disappointed, although one correspondent took me to task for placing heleniums ahead of *Salvia azurea*. Recently, however, a reader who has been going over his old copies of the American Nurseryman wrote me that a great injustice had been done the Michaelmas daisies by giving them even second place in a list of fall flowers. As a brief introduction to the subject of this paragraph, it might be well to state why I prefer heleniums as garden subjects to the more popular asters.

The principal objection I have to fall asters is their susceptibility to disease, especially mildew. It may be that this garden is an exceptional case, but it has been quite impossible for us to grow a presentable specimen of named asters during recent years without continuous spraying. And I for one refuse to spend all the time I have for garden work in making life pleasant for one sickly plant when there are numberless sturdy ones of equal or greater merit. The problem of upkeep when dealing with asters, including removal of flowers before the seeds are scattered to the four corners of the garden or the subsequent removal of self-sown seedlings, also has an influence in my appraisal of asters. I should not want to leave the impression that I do not like asters, for they have been among my favorite garden plants and I still buy nearly every new one that comes out, hoping to find a few that I can grow without too much labor.

Heleniums, on the other hand, give much for the little work necessary to keep them watered during long dry periods. And with the advent of modern varieties they have greatly broadened their field of usefulness. It is now possible to have them in bloom from June until frost, commencing with the newer introductions in the early part of the season and ending with the tall-growing kinds. Among the early bloomers, I have found the bright orange-yellow Chippersfield Orange, the brown-red Moerheim Beauty and the golden-yellow Madam Canivet of special value, while the soft gold of Gartensonne and the old gold of Riverton Gem are pleasing in the late garden scene.

Jeffersonia Dubia.

One of the interesting and inexplicable facts that the student of plant distribution first discovers is that several plants of the eastern United States have close relatives in eastern Asia, with no intervening stations for either kind. For instance, in our eastern woodlands we find the beloved twinleaf, *Jeffersonia diphylla*, with its small white flowers in spring. Then we jump all the way to Manchuria's woodlands before we find the only other *Jeffersonia* known to botanists, *J. dubia*.

In the latter we find a plant both rare and beautiful, two factors which contribute to the making of plant value for the nurseryman, especially when that plant happens to be amenable to cultivation. It is pleasant to remember, therefore, when speaking of this Asiatic, how readily it adapts itself to garden conditions in this country. Many beauties in the plant world, as among human beings, hide a detestable disposition behind pleasant outward masks, but not so with *Jeffersonia*. For example, my oldest clump, now about 10 years old, this spring had upward of fifty of its lovely blue flowers (something like a glorified hepatica) open at one time. All that has been needed to secure those gratifying results was planting in a leafy soil in shade. Like many woodland plants, *J. dubia* may need some attention paid to its moisture requirements until it is well established, but experience in this garden shows that it is quite able to take care of itself after that. Judging from experience with our native species, this one no doubt could be easily

propagated from fall-sown seeds. It comes easily from divisions made soon after flowering, and inclusive experiments here tell me it can be grown from leaf cuttings made by pulling leaf and petiole away with a piece of the crown, but correct handling of the latter needs further trials. It would pay anyone interested in propagating this worthy subject to try leaf cuttings in early June.

Sweet Violets.

Have you noticed the interest that gardeners are taking in sweet violets? I think it is a fact that more plants of this class have been sold during the past two years than in the preceding decade. Regardless of the cause for the revival (it may be no more than the ordinary cycle in which some plants seem to move), the fact remains that it means business for those who are prepared or will quickly prepare themselves to take care of the demand. Perhaps the introduction of new or little-known kinds may have had something to do with the revival.

It would be useless to go into detail regarding all the named varieties now in gardens. I am not prepared to do that job, anyway, for several kinds popular in more temperate sections can only be grown indoors or in frames this far north. However, I should like to mention a few kinds which I suspect have had some influence on their present popularity.

At the head of the list I should place the everblooming sweet violet, *Viola odorata semperflorens*. It is probably true, as I have been told, that this plant does not open its flowers during hot weather in the south; here it commences to bloom with the first of its kind and continues without interruption right up to the snow line. There is scarcely a day during all that long period that I cannot pick a bouquet of its intensely fragrant, deep violet flowers. It is perfectly hardy and a strong grower, showing none of the weaknesses of some kinds. For this section, at least, I consider it one of the best garden plants introduced for a long time.

From experience here, I should judge that Royal Robe is being somewhat overpraised by writers of catalog copy. It is true that the flowers are large, that they open out flat like a pansy and have long stems which make them good for cutting, but when they are called exceedingly fragrant, I must say that is something the plants I have bought do not live up to. Nevertheless, the plant has much merit and would be valuable for local sales on sight alone.

I cannot speak of its hardiness, because I do not risk sweet violets in the open until I have stock to lose.

Two European varieties, Admiral Avellan and Empress Augusta Victoria, should be in all collections. The first of these is a strong-growing English variety, whose pretty reddish-purple flowers, on long stems, add a pleasing touch to any violet planting. It is not always reliably hardy here. The other is not only entirely hardy, but its dark purple flowers (among the darkest that I know) are intensely fragrant.

I have become enamored with *V. odorata sulfurea* (vilmoriniana of some) during the few years that I have grown it and should like to pass the word along to other lovers of sweet violets. It can scarcely be called yellow, as some would have it, but neither is it white; let us call it cream or sulphur and let it go at that. In any case it is quite distinct in the species, which sets it apart in any collection. It has been a vigorous grower here under the conditions (shade and a leafy soil) in which others of its kind also take delight, spreading a leafy carpet quite rapidly and, at the usual sweet violet time, fairly covering itself with fragrant flowers. Unfortunately, it is a little too tender for our coldest winters, especially in unprotected places, but I should expect it to be hardy in most sections. If you grow sweet violets, it would surely pay you to investigate this one.

Chrysanthemum Mme. Chiang Kai-shek.

This note is based on the experience of a friend who gardens north of 45 degrees latitude, making me think that his reactions to this new chrysanthemum are of more value than anything I could say. He writes in part as follows: "I shall not attempt to describe the subtle charm of the Madame's color; nor shall I try to tell you what it is, except to say that the general effect on me is old gold. It does, however, carry several shades which together add up to that total, including a slight rosy cast when seen under bright sunshine. It is a pleasing color and one that is enhanced by an almost perfect flower. The petals have a great deal of substance which, together with their formal dahlia shape, makes them able to stand up under much punishment from inclement weather, including frost. Mme. Chiang Kai-shek usually commences to open a few flowers here in late August, but is at its best during September. I have advanced the season a little by shading and believe this mum could be brought into flower

here by the second week in August if one religiously followed shading. It seems to have most of the other desirable characteristics of the near-perfect chrysanthemum. For instance, it is one of the few hardy chrysanthemums that we use regularly for commercial cut flower production in the open. And in the cloth house, we can, with disbudding, produce individual flowers which compare favorably with the greenhouse products. In my opinion, it is one of the better hardy mums for either garden use or for cutting."

GEORGIA MEETING.

The eighth annual meeting of the Georgia State Nurserymen's Association, held at the University of Georgia, Athens, May 6 and 7, was deemed the most successful annual get-together of the organization to date. It was well attended, and all the addresses were timely. The setting for the meeting in the 100-year-old Landscape Architecture building, which is surrounded by a series of memorial gardens honoring the founders of America's first garden club, contributed its share toward making the occasion a success.

The meeting was held in conjunction with a short course for landscape architects, contractors and nurserymen. Prof. Hubert B. Owens, head of the landscape architecture department of the university, presided at the morning session, while the afternoon session and business meeting of the Georgia association was conducted by John H. Baird.

The program consisted of talks by Henry B. Chase, Chase, Ala.; Lee S. Trimble, of Georgia's new agricultural and industrial board; Richard H. Jones, Nashville, Tenn., and university professors.

Other high lights of the program were the organization of a Georgia chapter of the American Association of Nurserymen by Richard H. Jones, vice-president of the national body, and the round-table discussion led by James G. Bailie, Fruitland Nurseries, Augusta, Ga.

The following officers were elected for the coming year: President, M. Aubrey Owen, Gay; vice-president, S. C. Hjort, Thomasville; secretary-treasurer, H. A. Sneed, East Point.

THE Eidson Landscape Co., Bala, Pa., has sold the big greenhouse range at Whitmarsh, Pa., comprising over 100,000 square feet of glass on thirty acres of land, to Francis W. Ruzicka, of Ruzicka's Acres of Roses, Chatham, N. J.

INSECTICIDE OUTLOOK.

Supplies of agricultural insecticides and fungicides are tighter this season than in any of the previous war years and conditions affecting production and distribution will not permit last-minute rushes for supplies, manufacturers warn.

In many sections of the country the early season has advanced the demand for some materials about thirty days ahead of the demand in normal years. This has placed a heavy burden both on producers and on transportation facilities in the face of shortages of some raw materials for the insecticide industry, car and truck shortages in the nation's traffic system and acute manpower shortages in both. Added to these difficulties is a lag in the delivery of containers to insecticide manufacturers for use in packaging.

Although pyrethrum supplies are tight, they are larger than for some time past. Difficulties in obtaining the insecticide are attributed to end-use restrictions, allocation procedures and shortages of certain desired forms. Ample supplies of pyrethrum are predicted for 1946 as a result of larger-scale manufacturing operations.

Rotenone continues tight, but the situation is believed to be no worse than last season. Immediate supplies are limited and only minimum quantities of rotenone powder are available for allocation in the near future.

No substantial improvement in rotenone supplies in 1946 over this year is possible. Rotenone is a 3-year crop and the acreage was not increased sufficiently three years ago to provide requirements needed this year and next. Somewhat larger supplies may be available if some of the obstacles to its flow into consuming channels, such as transportation and labor shortages, are removed.

Nicotine insecticides are exceedingly tight because of the shortage of tobacco to make them. Demand for all types of tobacco exceeds the supply. The insecticide industry will process all the available tobacco, but nicotine production this year will depend upon the amount of raw materials made available to the industry by the War Food Administration.

All copper fungicides remain in tight supply. Any easing in the raw metal situation will be too late to increase the output for this season's consumption, producers say.

Ample raw materials are available for manufacture of cryolite.

The supply of calcium arsenate is reported adequate. The lead arsenate supply, while tightening, is deemed

PEACH AND APPLE TREES

Fall 1945 Delivery

We have, over our needs, sufficient labor and Peach Seedlings to grow on contract 150,000 June Budded Peach Trees to such varieties as suit the purchaser. Budding starts May 20 and ends June 10 to 15. Could dormant bud 50,000 for Fall 1946 delivery.

June Budded Peach	Dormant Budded Peach	Apple
6 to 12 ins.	5/16 to 7/16-in.	100,000 1-yr. Grafts
12 to 18 ins.		12 to 18 ins.
18 to 24 ins.	7/16 to 9/16-in.	18 to 24 ins.
24 to 30 ins.	9/16 to 11/16-in.	2 to 3 ft.
30 to 36 ins.		3 to 4 ft.
3 ft. and up	11/16-in. and up	4 to 5 ft.

Inquiries for prices, naming quantities of each variety and sizes of peach trees wanted, are invited. List of varieties of 1-year apple mailed upon request.

We are in the market for quantities of other kinds of fruit trees and small fruits. Will exchange or buy now. Write for want list.

TENNESSEE NURSERY CO.
Box 1 Cleveland, Tenn.

EVERGREENS

For fall delivery.

- We are one of the largest growers of evergreens in the country.
- You can't buy better evergreens anywhere.
- The next time you are in the market, try WILLIS first.

THE WILLIS NURSERY COMPANY
OTTAWA, KANSAS

sufficient for this season's requirements.

Supplies of other materials have been reported as follows: Borax, adequate; calcium caseinate, adequate; cresols and cresylic acid, tight; dinitro compounds, adequate; Paris green, tight; phenols, tight; organic sulphurs, extremely tight; sulphur, tight; tartar emetic, scarce; zinc compounds, tight to adequate, and London purple, adequate.

Soluble and spray oils are adequate as are thiocyanates and other chemical extenders. The supply situation for wettable stickers and spreaders varies. The range is from adequate to extremely tight.

The supply of most fumigants such as cyanide, ethylene dichloride, methyl bromide, chloropicrin and carbon bisulphide are termed ade-

quate by producers. Carbon tetrachloride is adequate for those end uses for which it is permitted.

Mercurial seed protectives are tight, but the supply of chloranil is said to be adequate. Although copper oxide has been in tight supply, stocks are said to be increasing.

BEFORE long will be marketed a recently developed compound which protects machinery from rust for eight months after being sprayed on metal. The compound has such an affinity for metal that, instead of floating away when moisture is present, it remains under the oil. Since a spray will reach parts not easily covered by a paintbrush or dauber, the compound will probably replace crankcase oil and gear grease as a rust preventive.

Repeat Sales and Good Will

By Louis Vanderbrook

For several years I have conducted, as a personal venture, a rather lucrative retail business, as well as administering our regular wholesale concern. Bear in mind, however, that the following statements are not intended to cast reflections upon anyone engaged in the retail nursery business, but are rather an enumeration of the factors which, through personal experience, I have found to pay excellent dividends in dealing with the retail customer.

The first rule which must be adopted is to be absolutely honest and resort to no trickery whatever. The buying public has become so accustomed to being gypped in one form or another by various sales agencies and salesmen, not necessarily nurserymen, that when buyers find they are being dealt with honestly they are at first astonished and then grateful enough to come back again and also to bring others.

Treat the customer as you would like to be treated were you buying the merchandise. Keep appointments absolutely on time, and you will save your own time as well as that of the prospect. Always sell to both husband and wife, together if possible, and avoid future misunderstandings.

Do not try to sell customers more plants than are absolutely needed properly to landscape the premises and attain the desired results. Many times I insist that less plants be used than the customer desires, to allow room for future growth and expansion. This, again, shocks him, because he thinks you are talking yourself out of part of a sale, but I would much rather have a customer's high regard for a job properly planted than the few extra dollars for the additional plants, which will in the end spoil the entire effect.

Explain to the customer just what will happen over the course of a term of years if this plan is not followed, and he will invariably agree. Strive always to plant long-term or permanent plantings which will not require removals or renovations after a few years.

Plant only materials adapted to the climatic zone in which the customer lives so that mortality may be avoided. Mortality in a planting only

means extra work for yourself and breeds lack of confidence in your work. Call yourself an expert or skilled craftsman if you will, but by all means live up to that name and you will accumulate a healthy respect from your customers.

Insist on the use of good loam and manure so that plants may have the proper food to maintain good growth. Then take sufficient time to plant properly and insure good growth.

In selling either to men or women, alone or together, I never take them to the nursery to see the stock unless absolutely requested, but sell mainly by word picture. The reason for this is that a good many customers, on traveling through the nursery, will spot some type or specimen of plant not adapted to their particular job and still desire the use of that material.

Most of my accounts are planted without the customer's having seen a plant and depending entirely upon the recommendation of a former customer.

In the matter of price, remember that you are a highly skilled craftsman; so charge accordingly. No one really expects to get something good for nothing or cheaply. Do not worry about competitors. Let them have the cheap accounts. The others will eventually become your accounts in time anyway.

I have adopted the slogan, "Only one quality, the best." If this slogan is adopted, no matter what happens, live up to it.

Now we come to the most touchy subject of all, the matter of a guarantee. It has been my policy in the past and it continues to be my policy in the future, regardless of what some may say, to guarantee all stock which we plant for a period of one year from the time of planting, provided the account is paid in full within thirty days from date of invoice.

With this broad guarantee, I reserve the right to decide when is the proper time to plant. With the 30-day payment clause my collections, believe it or not, have always been 100 per cent. Jobs are checked and if a dead plant should be found, which is seldom, a new one is immediately planted gratis, without waiting for the customer's complaint.

By personal supervision of all plant installations and by planting fresh or freshly dug material, not allowed to stand around for several days,

again, believe it or not, the mortality rate is less than one per cent.

By a strict adherence to the foregoing principles, my retail business has increased steadily year by year, with no advertising whatever other than the recommendations from one satisfied customer to another.

Invariably many of these satisfied customers come back each year for additional work. At present the customers are taught to service their own plantings, but as a postwar project I intend to sell not only high-quality plantings, but also high-quality service.

All customers are charged one standard price, which, you can rest assured, is high. All customers, whether patient or impatient, are handled with tact and courtesy at all times, with the thought always in mind that good will is as valuable as cash in the till.

THANKS

For the splendid response to my early advertising on June Bud Peach and Year-Old Apple . . it was great.

Unfavorable growing conditions make it necessary to discontinue accepting sizable orders until the growing season gets further along.

Give me a chance at your requirements in August and September.

FARMERS WHOLESALE NURSERY

Paul Patterson, Owner

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"YOU GET WHAT YOU BUY"

Talk by Louis Vanderbrook, of C. L. Vanderbrook & Son, Manchester, Conn., before the annual meeting of the New England Nurserymen's Association, at Boston.

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NORTHERN COLLECTED EVERGREENS

Hardy, well rooted. *Abies balsamea*,
Thuja occidentalis, *Tsuga canadensis*.

Priced per 1000.

3 to 6 ins. . . \$ 6.00 9 to 12 ins. . . \$18.00
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Splendid Stock

Write for Special Quotations

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Bernardsville, N. J.

WHITE-PINE BLISTER RUST.

White-pine blister rust has been reported from twenty-six states, occurring in abundance in the principal timber-producing areas in the eastern and western white pine regions and the northern half of the sugar pine region. The chief points of interest in the spread of the rust in 1944, said J. F. Martin in a recent issue of the Plant Disease Reporter, were the findings of infected areas of white pines in five new counties in northern Iowa, a 65-mile extension southward of the rust on ribes in California, the discovery of the infection on ribes in Yellowstone National Park and the finding of the disease in Montana on *Pinus flexilis* within its natural range.

Every spring blister rust spores from diseased white pines are spread over wide areas by air currents. When the spores fall on ribes (currant and gooseberry plants) and conditions are favorable for germination and growth, they infect the leaves of these plants. Development of the disease on ribes leaves and the infection of near-by white pines depend largely on weather conditions; so each year local variations in the spread and infection occur on both pines and ribes. Natural invasion of a territory by this disease occurs on ribes and always precedes its appearance on pines by a few years. However, over a period of years favorable weather will at times coincide with the maturing spore stages on ribes and cause pine infection, thus enabling the disease to spread slowly and become established in new areas.

In the northeastern states the amount of infection varied from a small percentage of diseased trees to nearly 100 per cent in some stands. The disease occurs every year in ribes during the spring, summer and fall, varying with the weather favorable to rust development. In the protected areas most of the smaller diseased trees have died and cankers resulting from recent infections are scarce. This is a complete reversal of the situation that existed in earlier years of the control program, when cankers were prevalent in nearly every stand. The absence of such cankers in protected areas is largely a result of perseverance in ribes eradication under the control program conducted by the United States Department of Agriculture in co-operation with the affected states and other federal agencies.

THE firm of John S. Wolcott & Son, tree experts, has moved from 117 Hollister street to 180 Main street, Manchester, Conn.

EVERGREENS—In a large assortment of *Thuja*, *Juniperus*, *Chamaecyparis* and *Taxus*.

LARGE SIZES — *Cryptomeria*, *Arborvitae*, Pine and Moss Cypress.

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This Business of Ours

Reflections on the Progress and Problems of Nurserymen

By Ernest Hemming

VALUE OF NURSERY STOCK.

Value depends on many things. While we try to use gold as the standard of monetary value, even gold has no value to a castaway on a desert island. In the same way, the value of most nursery products changes according to time and place. In comparison with most other lines of merchandise for which there is a market, most nursery products are the least constant in value of any.

In the first place, plants are living organisms, absolutely essential to our existence. Yet, at the stage at which they may be considered as merchandise, their value is only potential. Otherwise they are rather a liability to the owner than an asset.

The practical nurseryman can look back over the years and remember many times when he guessed wrong. That block of oaks he grew with so much care and expense, the majority of which he got rid of at considerable cost in labor. Or that big stock of fruit trees which he grew and stored, that ended up at the brush pile.

While ruminating on the vagaries of values of nursery-grown trees and plants, it would perhaps be well to give thought to what the layman thinks about it.

It is well known that the attitude of the city-bred toward anything that grows in the country is that it is free. And this attitude ramifies through all stages of society to a greater or lesser extent. A person who would never dream of stealing anything from a counter in a store would not have the same qualms about taking plants. They grow; they are not manufactured.

I recall that Thomas Meehan, founder of the Meehan Nurseries, Germantown, Philadelphia, Pa., when asked for a donation of plants by some church or charity, preferred to give cash, in an effort to educate the public as to the value of the goods he was selling.

I remember an amusing incident bearing on the subject that happened when his sons were running the business. It was customary to buy enough fruit trees to carry us through the spring shipping season. One year we overbought, and there was a beautiful lot of trees with nowhere to go but the brush pile. Mr. Meehan thought it a good idea, rather than to let them go to waste, to present some of our best customers with a

small collection. However, the gift did not work out the way it was intended. Some of the recipients wanted to know what was the matter with the trees. It is a fact, nursery stock is not a finished product and is not even wanted until it is really demanded.

On the other hand, another nurseryman florist for whom I worked many years ago at Colorado Springs, Colo., successfully carried out the same idea with his surplus crop of roses. These were gratefully received and helped build business.

The answer to all these speculations by the individual nurseryman lies in his ability to gauge the demand, or market. This is fairly easy when he is catering to a local market, but even then he has to keep his ear close to the ground to make a good guess as to what will have selling value a year or two hence.

On the whole, the value of nursery stock is as fluctuating as any other merchandise, only more so, with the added risk of its becoming a liability.

Operating a nursery is great fun if you happen to be solvent. E. H.

THOMAS J. KILDERRY, tree surgeon, has sold his business at Torresdale, Pa., and is establishing a new nursery at Lumberville, Pa.

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Westminster, Md.

SHADE TREES CONIFERS

Good assortment of
varieties and sizes.

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JACKSON & PERKINS COMPANY
Newark, New York

CALCIUM CHLORIDE INJURY TO ROADSIDE TREES.

The number of cases of injury to trees along gravel highways treated with calcium chloride as a dust palliative has warranted study by the Michigan department of agriculture to determine whether the calcium chloride contained in impounded runoff waters from the highways was responsible, or if not, to what cause the injuries could be laid.

In most cases where the injury occurred it was light to severe leaf scorch (needle burn of conifers), but since the symptoms were no different from those of leaf scorch caused by drought, it was impossible to determine just how much injury was due to each factor. In seasons of heavy rainfall less leaf scorch was apparent along both treated and untreated highways, and in seasons of drought the presence of calcium chloride in the soil accentuated leaf scorch injury.

Experimental studies with young trees have shown that trees can be killed by applications of calcium chloride to the soil and that tree species vary in their tolerance of it. The roots did not seem to be injured so much by the intake of calcium chloride as the tissues where the salt accumulates (leaves or needles). It was also found that direct applications of calcium chloride and dust mixture to the leaves did not

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C. F. WASSENBERG - Van Wert, O.

THANK YOU!

We appreciate the business our customers sent us this past season.

You have displayed confidence in us, and you may rest assured that in the future you will receive the same good stock and service. We expect to have a good assortment of stock for the coming year and shall appreciate an opportunity of quoting on your requirements.

SHERMAN NURSERY CO.
Charles City, Iowa

ORNAMENTALS

**TREES SHRUBS
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Wholesale growers of a general assortment for the best Landscape Plantings

BRYANT'S NURSERIES
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**NOVELTY PERENNIAL and
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Wholesale Trade List now ready.
Send for your copy.

CARROLL GARDENS Westminster, Md.

produce symptoms of leaf scorch, but caused a characteristic brown spotting of the leaves. Sodium chloride proved five to ten times more toxic to elms and white pines than calcium chloride.

In their development of better highways, highway engineers have already put remedial measures into use. Dust has been virtually eliminated through proper construction by the mixing of properly graded aggregates with binder soils in the right proportion and using calcium chloride as an agent to retain sufficient water in the mixture. Loose surface materials which may be thrown or blown from the highway surface have been eliminated. Drainage at the sides of highways has been planned to carry away runoff waters and prevent the impounding of water in low places. It was found that there was no cumulative effect of calcium chloride washed from highway surfaces to the roadside because of the greater amount of leaching in the soil there. Trees growing close to the highways have been removed as a safety measure. Such trees have shown the most severe leaf injuries. Heavy applications of calcium chloride, twelve and one-half tons per acre, proved innocuous to plant growth by the following day. Consequently, smaller amounts of calcium chloride per application are being used and applications are also being made in proper reference to weather forecasts to avoid serious loss by runoffs occasioned by heavy rainfall.

OBITUARY.

Herman Charles Locke.

Herman Charles Locke, owner of the Locke Nursery & Floral Co., San Antonio, Tex., died May 7, at the Santa Rosa hospital. Burial was the following day at New Braunfels, Tex.

Mr. Locke was born October 30, 1883, at New Braunfels. He attended the public schools there and then entered the employ of the Comal Springs Nursery, which had been founded in 1886 by his father, Otto Locke, Sr. He was associated with his father's firm until 1936, when he moved to San Antonio to operate the business of which he was owner until his death.

Surviving are his widow, Mrs. Helen D. Locke; a son, Howard W. Locke, of the New Braunfels Nursery & Floral Co., Inc.; two brothers, Walter F. Locke, of the Locke Poteet Nursery, Poteet, Tex., and Otto M. Locke, of the Otto M. Locke Nursery, New Braunfels, and a sister, Mrs. Hulda Gold, of San Antonio.

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SHENANDOAH NURSERIES**
SHENANDOAH, IOWA

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Variety of Vinca Minor

Large blue flowers.
Excellent ground cover.

Field-grown, 6 to 10 runners.
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In the Country's Service

STEPHEN E. GRANT, who operated a tree service at Millbrook, N. Y., has been on submarine duty for the past eighteen months and is now in the southwest Pacific.

GEORGE F. WILL, JR., son of the president of Oscar H. Will & Co., Inc., Bismarck, N. D., completed four months' basic training in March and is now in the south Pacific. He will be 19 years old in August.

J. E. O'CONNELL, Narberth, Pa., has been in the army since last July and has been in Italy with General Clark's Fifth army since December. He expects to be transferred to the Pacific theater soon.

RAYMOND F. MARTIN, seaman first class, son of R. F. Martin, of Martin's Nursery, Carrollton, Ky., aboard a destroyer in the Pacific for the past twelve months, has seen much action, including the Iwo Jima invasion.

DR. HENRY T. SKINNER, curator of the Morris Arboretum, of the University of Pennsylvania, Philadelphia, Pa., has been in the army air corps since July, 1943, and is now with the 100th air base unit, at Mitchell Field, L. I., N. Y.

AFTER fourteen months' service in the Pacific, Corp. David R. Bulk, son of Jac Bulk, proprietor of Bulk's Nurseries, Inc., Babylon, N. Y., is now stationed at Eagle Mountain Lake, Tex. Corporal Bulk enlisted in the marines in February, 1943, while a student at Cornell University.

WILLIAM E. RIGGERT, seaman first class, son of H. W. Riggert, president of Coe, Converse & Edwards Co., Fort Atkinson, Wis., is taking his basic training at the naval training center, Great Lakes, Ill., after passing the Eddy test for radar, April 9.

SGT. WARREN R. MARRIAGE, whose mother, Mrs. G. R. Marriage, operates the Upton Gardens, Colorado Springs, Colo., is with the combat engineers in Germany. His sister, Mollie, a first lieutenant in the WAC, is stationed at Fort Hamilton, Brooklyn, N. Y.

FREDERICK J. NOBLE, JR., son of Frederick N. Noble, of Lovett's Nursery, Inc., Little Silver, N. J., who is a seaman first class at the A. O. M. school, Norman, Okla., is an occasional visitor at the home of J. Frank Sneed, Oklahoma City, Okla., president of the American Association of Nurserymen.

JACK SNEED, son of J. Frank Sneed, Oklahoma City, Okla., A. A. N. president, has been promoted to first lieutenant in the marine air corps and is making night flights over Okinawa. Mr. Sneed's son-in-law, Lieut. R. R. Bloss, Jr., is an instructor at the airfield at Douglas, Ariz.

O. A. D. BALDWIN, proprietor of the O. A. D. Baldwin Nursery Co., Bridgman, Mich., has three sons in service. Lieut. Bun Baldwin, Jr., who was wounded in action March 9 while with the Ninth army in Germany, lost his left leg and is now at Percy Jones hospital, Battle Creek, Mich. Lieut. (j.g.) Greyson D. Baldwin is commanding an oil tanker running from Seattle to Pearl Harbor. Staff Sgt. Forrest W. Baldwin is with the combat group engineers at Manila, Philippine islands.

LESLIE S. MACROBBIE, son of Leslie H. MacRobbie, proprietor of the Oak Park Nurseries, East Patchogue, N. Y., is a technical sergeant with the 334th engineers now in Germany, doing educational work in the new program to keep G. I. Joe busy now that the fighting is over. Sergeant MacRobbie was in Iran for two and one-half years and then in France engaged in reconstruction work until March. He will take over the active management of the Oak Park Nurseries upon his return from the army.

MR. AND MRS. CHARLES WILMORE, operators of the Green Bowers Gardens, Wheat Ridge, Colo., received notice from the President that they eventually would receive a Silver Star, which had been awarded to their son, Stanley, for gallant action in Europe. He is now missing in action. Their other son, Kenney, is with the navy somewhere in the south Pacific.

TECH. SGT. CHARLES TANNER, foreman of the Shepard Nurseries, Skaneateles, N. Y., a veteran of five major battles in the European theater, reported for reassignment May 12, after enjoying a 50-day furlough. Albert Deyneka, field foreman for the Shepard Nurseries, a veteran of the Iwo Jima invasion, is now at the navy hospital at Great Lakes, Ill. Another employee of the nurseries, Thomas Spearing, who participated in six naval battles while attached to the U.S.S. Alabama, is now stationed at the navy yards at Philadelphia, Pa.

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ins. in unlimited quantities. Also large specimens
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MARTIN L. HARKEY, JR., only son of M. L. Harkey, of the Harkey Bros. Nurseries, Inc., Charlotte, N.C., was unexpectedly transferred to the University of Virginia, Charlottesville, to study electric power and engineering. He has served fourteen months in the navy's V-12 program and is now completing his sophomore year of college.

H. H. CUMMINS, the 85-year-old proprietor of the Melba Nursery, Melba, Ida., has two grandsons in service. The elder, Herschel M. Cummins, is a bomber pilot now flying somewhere near Japan. He has been decorated for shooting down several Jap planes. The younger boy, Lieut. Harry K. Cummins, is in a hospital in California, recovering from wounds inflicted by a Nazi sniper in France. Both boys have been home on furloughs once and Harry is expected home on a 30-day leave soon.

DONALD A. KUSSE, storekeeper third class, son of John A. Kusse, secretary of Brown Bros. Co., Rochester, N. Y., has been in the navy since November, 1943. After landing in north Africa he was stationed on an LCI boat, making trips to Sicily, Italy and Corsica. He returned to this country several months ago and is at Little Creek, Va., awaiting new shipping orders. A son-in-law, Charles W. Gleason, electrician's mate second class, entered the navy in August, 1942. Assigned to a destroyer, he has made trips to Casablanca, Algiers, Scotland, Ireland, South America, Bermuda and Cuba, and is now stationed in this country awaiting further shipping orders. He has received one star for combat in the Mediterranean area and also the Presidential Unit Citation. Another son, Robert J. Kusse, is a test pilot for the Curtiss-Wright Corp.

ALABAMA WAGE-HOUR BILL.

An administration bill providing for a state wage-hour law was introduced in the Alabama state legislature May 8 by Representative James E. McCurdy, of Escambia, and Senator Gordon Madison, of Tuscaloosa.

The proposed legislation would set up a minimum wage of 30 cents an hour and a maximum 48-hour week for intrastate workers not covered by the federal fair labor standards act. Agricultural, dairy and domestic workers would be exempt.

State Labor Director Emmett Brooks estimated that about 150,000 to 160,000 employees in 22,000 Alabama firms would be affected by the measure. B. J.

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1 basket, 2000 plants.....\$ 6.00

1 crate, 4000 plants.....12.00

Wire or letter orders filled the day received.

Express charges prepaid.

DUKE PLANT CO., Dresden, Tenn.

ANNOUNCE CALIFORNIA ASSOCIATION SECRETARY.

At Chapter Meeting at Niles.

The May meeting of the Central California Nurserymen's Association was held at Niles, May 10. The attendance was about the same as it had been during the winter months. This was in effect an increase, for at this busy time of the year there is usually a drop in the number of those able to be at the meetings.

The business session, made short by President Fred Hammarstrom, largely concerned a report by Clyde Stocking, of San Jose, president of the California Nurserymen's Association, of the appointment of a new executive secretary for the state group. In the absence of the secretary, Jack McDonnell read the minutes of the previous meeting.

The new secretary of the state association is Jack Lincke, presently employed in the personnel department of the Continental Can Co., with headquarters at Los Angeles. The new offices of the association also will be at Los Angeles. Mr. Lincke is a graduate in journalism of Montana State College and for a time did some free-lance work. From about 1938 until a few months ago he had been an officer in the navy air corps, spending the latter part of his service as an instructor. Mr. Stocking announced that the selection of Mr. Lincke was a unanimous action on the part of the committee recently appointed to interview and select a secretary and said that he felt the committee had done well in obtaining the kind of man which it had. The committee and Mr. Lincke have laid out a definite program for the coming year, beginning June 1, when Mr. Lincke takes over his new duties.

The speaker of the evening was E. L. Anderson, landscape architect, of Oakland. Mr. Anderson was one of a committee of thirteen from the Association of Landscape Architects of the San Francisco region, who, at the request of the Central California Nurserymen's Association, selected a list of plants which they would feel free to recommend to nurserymen to propagate for the postwar housing period because of the aptness of those plants to local California conditions. He presented the list, selected from the catalogs of the nurserymen, with a scoring given to each plant by this committee from the architect's point of view. It is a long list of ten mimeographed pages and, if nothing else, gives the out-of-state person an idea as to the large selection of plant

material available to the homeowner in this area. Mr. Anderson made it plain that this was only a beginning, and he invited criticism from the floor. In general, most of the comments were in agreement with the speaker's, but some of the members mentioned plants not given on the list. Others felt some good plant material had been ignored entirely, and still others believed that some plants listed as "omit" or marked down nearly to omit had many valuable characteristics if grown properly and should be given more consideration. However, as Mr. Anderson said, it is a start in the making up of such a list, and from such starts of interested but unselfish men come results that are of benefit to the homeowners, the nurserymen and the home grounds planners.

Mr. Anderson read rather generously from a recent article in the American Nurseryman by Dr. L. C. Chadwick, which dealt with the problem of postwar management of the nursery business, and he suggested to those who had read it that they do so again, while to those who had not read it he recommended its perusal.

The next meeting will be at Niles, June 14. W. B. B.

WESTERN TREE MEETING.

Because of wartime conditions, the twelfth annual meeting of the western chapter of the National Shade Tree Conference was limited to a small informal gathering, May 25, at Santiago park, Santa Ana, Cal., with Dale Griggs, the chapter president, presiding. Reports of officers and committees and a few addresses were heard.

CALIFORNIA readers will be interested in the newly inaugurated series of leaflets of the Santa Barbara Botanic Garden devoted to outstanding plants of that area. The annual report shows further marks of progress by this 18-year-old institution.



POINSETTIA LUMBER.

Paula Kenda, San Antonio, Tex., has been granted a patent for a method of making hard lumber from poinsettia plants. The plants are harvested and ground into fine particles while the latex in the plant is still liquid. This mass is then subjected to a wet steam bath from an acetic acid solution for ten minutes. The pressure is built up to 175 pounds per square inch and suddenly released, which explodes the saturated material and releases the latex. The mass is then dried to a paste, put into the desired forms and compressed at a pressure of 2,000 pounds to the square inch. The inventor says that the finished product is harder than wallboard and also points out that poinsettias may be grown almost the year around in the south, where yields of thirty tons per acre are not exceptional.

THE new rose, Peace, was christened at the Pacific Rose Society show on the day that Germany fell. A specimen of the rose was presented to the head of the delegation of each nation at the San Francisco conference.

A. H. STEINMETZ, of the Portland Wholesale Nursery Co., Portland, Ore., left for California May 22 on a business trip of two weeks. Also in California on business are Paul Doty, of Doty & Doerner, Inc., Portland, and Wayne Melott, of the Carlton Nursery Co., Forest Grove, Ore.

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DUSTING VS. SPRAYING.

Renewed interest on the part of fruit growers in the use of dusts in place of sprays because of the economy in labor, greater speed of dusting and the simplicity and relative cheapness of dusting equipment has led to a further comparison of dusting and spraying for the control of apple scab and codling moth by workers at the New York experiment station at Geneva in cooperation with other agencies.

Reporting on preliminary findings with codling moth, Prof. S. W. Harman, station entomologist, states that with the better dusts now available dusting may be used successfully in place of spraying in orchards where the codling moth is not a major problem. In orchards heavily infested with codling moth, dusting as usually practiced has not given so dependable results as spraying.

Among the dusts tested, a combination of sulphur, arsenate of lead and nicotine, in which the nicotine was in the form of Black Leaf 155, proved the most efficient for codling moth control. The cost of this dust for a season's treatment is approximately three times that for spray materials, but the labor of application is only about one-fourth of that required for spraying.

WAYNE E. MCGILL, of A. McGill & Son, Fairview, Ore., contemplates a short eastern trip in July.

THE automobile of John Holmason, of the Pacific Coast Nursery, Portland, Ore., which was stolen from his garage May 12, has not yet been located. The gasoline tank was full. John says that he always treats his customers right.

W. H. COLLINS, recently released from the army, has opened a nursery at 11560 Atlantic boulevard, Lynwood, Cal. Mr. Collins has had considerable propagating experience and is the grandson of the operator of the Wieland Nurseries.

MAIL COPY EARLY.

Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the June 15 issue, please mail in time to reach this office by June 6.

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Hepatica Triloba

By Paul Swoboda

In a recent issue of the *American Nurseryman*, in the article, "Plants for a Garden in Shade," C. W. Wood wrote about *Hepatica triloba* and its varieties. I am glad he did, because the hepaticas are not enough appreciated by nurserymen, perennial growers and landscape men. It is not recognized how useful these lovely plants are in shady locations in small gardens, as well as for naturalizing in more extensive areas. Furthermore, as Mr. Wood stated, there is much confusing talk about their culture. I have always been interested in hepaticas and while reading this article, I remembered an article on the subject written quite some time ago by a Hungarian aristocrat. That article gave a good description of natural conditions and how nature uses the hepatica in the wild landscape most effectively. The writer was a well known connoisseur of wild plants and quite famous for naturalizing larger areas with perennials and bulbs on his estate. I quote the most important point, and I am sure it will be helpful in the culture of the hepaticas:

"One of nature's most precious gifts of perennials is *Hepatica triloba*. Plantings of this perennial produce magnificent pictures of color in the landscape, if used correctly, in small spots as well as in larger places, such as parks and woodlands, where they will naturalize.

"The hepaticas are shade-loving children. *Hepatica triloba* is the best for naturalizing, and the native Hungarian *Hepatica angulosa*, with larger leaves, is more delicate and more difficult to grow. It prospers in the shade of the beech trees, but will endure more light and even sun under certain conditions—the right soil, even moisture and a humid atmosphere in cool localities. A well drained soil is necessary. Good and loose humus mixed with sand or fine fibers, forming a layer from which the plant will receive nourishment, is best. The roots do not penetrate deeply; so it does not matter what is underneath this layer—rocks, sand or loam. But it is of the greatest importance that this feeding layer consist of the right soil. It should not be permanently wet or boggy. However, in the spring, when the new shoots and sprouts are formed, plenty of moisture is necessary until their full development is reached, which

is quite rapidly. The lack of enough moisture at this period will result in small leaves, and if this condition is repeated often, the plant will suffer and grow only sparsely and may finally die. With enough moisture in the spring, the hepatica will stand dryness for some time afterward without showing any signs of suffering.

"Under trees where humus is formed from year to year and where the shade is dense enough that grass will not grow, one will find the most compact and perfect carpets of hepaticas. Such a carpet, created by nature and spreading for acres and acres, was discovered by me in the western mountainous region of Hungary in August, when I was searching for spots of *Cyclamen europaeum*, which grows under similar conditions. I made a special trip there in spring to see this vast lawn of hepaticas in full bloom. I never shall forget the overwhelming sight. Even the driver who brought me there still speaks of the blue sea of flowers we saw.

"Three evergreen perennials form interesting natural carpets in this region of Hungary: *Hepatica triloba*, *Cyclamen europaeum* and the easy *Asarum europaeum*. In planting combinations of this kind, one should be cautious, because *asarum* develops quickly and, if it is not held in check, will overrun the other two. The combination of hepatica with cyclamen is most attractive, and hepatica alone in masses will certainly give satisfaction.

"Only the blue form of *H. triloba* should be adapted for naturalizing, but I want to mention the double red *H. triloba*. On one of my trips I found a carpet about one hundred yards long of this red hepatica, perfect and without spots, in the garden of a teacher in a small village of Styria. This plant, forming a carpet of carmine color, covered with an abundance of flowers, can hardly be surpassed by any other perennial in brightness and intensiveness.

"We should not forget that *Hepatica triloba* is a perennial. It is green in the winter and should keep its foliage. It needs space above the ground for its development. Damaging its leaves, which can be easily done by raking fallen leaves of trees or by mowing, will prevent perfect growth. *Hepatica* belongs in a loca-



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tion where the raking of the ground is not done. Furthermore, just like the cyclamen, it does not thrive under trees with large foliage, because the dripping of large waterdrops will ball the soil when there is not sufficient sand with it.

"Sometimes it will be difficult to find the right location for planting hepaticas in small gardens, especially in heavy open soils. But there is always humus accumulated in the shrub border and underneath specimen shrubs, where they will do well and bring satisfactory results. These shrubs should not be early-greening varieties. Their leaves should not hide the hepatica flowers in spring. The really perfect use of this plant is in great quantities in parks and such places, without grass or only a light sprinkling of it. If the humus is not absolutely sour and wet, hepaticas will grow under fir trees, and even in the deep shade of evergreens on the northern expanse, which is what they have done here on my place, where they sowed themselves and naturalized perfectly in just such places."

PINE PIT SCALE.

Recent investigations have shown the pine pit scale to be widely distributed in southern New England, New York state and northern New Jersey. It attacks principally the pitch pine, although the short-leaved pine, table mountain pine, scrub pine and ponderosa pine are all liable to infestation. It is stated that over fifty per cent of the pitch pines on the outer end of Cape Cod, Mass., have been killed by this insect and that more than seventy-four per cent of heavily infested pitch pines near Mount Union, Pa., had lost their leaders in 1938. Unhealthy or dying pines should be carefully examined to ascertain the cause of the trouble.

The pine pit scale is a most inconspicuous insect, since it establishes itself on the new growth and as feeding progresses there is a gradual depression in the green bark, which is made more evident by a surrounding slight swelling. Later the insect may be found literally under the bark, the external indication being a circular opening about one-sixteenth of an inch in diameter. Within is a dark brown or blackish, saclike insect.

Unchecked breeding, as suggested by the data given above, may result in severe damage. The probabilities are that this relatively new pest can be controlled by thorough spraying with a lime-sulphur compound.

BOOKS ON LANDSCAPE SUBJECTS

Several of the recommended standard books on landscape design and planting, including some of recent authorship, are out of print, probably for the duration. Of the books now available, the following are considered the most useful. Since they treat different aspects of the subject, each is described in some detail, so that those seeking such books may be able to select that nearest fitting their needs.

GARDEN DESIGN, by Marjorie Sewell Cautley (\$5.00).

Discusses the principles of abstract design as applied to landscape composition, color composition, decorative elements and ornaments. A classification of foliage plants according to color and texture occupies one-third of the book. Simple definitions of the terms of architects and designers are supplemented by numerous sketches in illustration. Provides an understanding of artistic terms and principles, as well as their application.

TREES AND SHRUBS FOR LANDSCAPE EFFECTS, by Marian Cruger Coffin (\$3.00).

Chiefly concerned with the materials for landscape planting. Many fine pictures illustrate the author's comments on the uses of woody plants. Successive chapters discuss the trees and shrubs for gardens, the approach to the house, its setting, and the various sorts of landscape treatment of plants for various purposes, and they are derived from the author's experience as a landscape architect, as is the entire substance of the book.

PLANNING AND PLANTING YOUR OWN PLACE, by Louis Van de Bee (\$4.50).

Primarily designed to enable the amateur to plan and plant his own place without professional help. Hence there is a great deal of practical information in the chapters on grading, drainage, walks and drives, lawns, uses of woody plants in different planting styles, selection and care of plants, different types of gardens, maintenance and lists of plants for special purposes. Essentially a book of practical information on materials, tools, operations and maintenance.

HOW TO LANDSCAPE YOUR GROUNDS, by Loyal R. Johnson (\$2.75).

Discusses the steps taken by the small property owner in planting his grounds, including the architectural features, walks and drives, lawn, trees and shrubs and various types of gardens. Select list of plants for various purposes are included. The important feature of the book is a series of planting plans and keys for different regions of the United States.

LANDSCAPING THE HOME GROUNDS, by L. W. Ramsey (\$2.00).

Presents the high lights of the practical development of plans for gardens about the small home and the construction features involved. For the elementary steps through which the homeowner must go to understand the design and construction of home grounds, this volume is informative and interestingly written.

BOOK OF LANDSCAPE GARDENING, by Frank A. Waugh (\$2.00).

Offered as "a simple introduction to the simplest principles," and those seeking an introduction to the subject will find it in this treatise on the general principles governing outdoor art. Written in 1926, it was revised in 1941 after many printings.

LANDSCAPE ARCHITECTURE IN THE MODERN WORLD, by Karl B. Lohmann (\$2.50).

A book of recent publication (1941) which might be described as for the postgraduate in landscape designing. It dwells on the treatment of particular aspects of landscape architecture which are of comparatively recent importance and not much touched upon in the older books, such as parks, outdoor theaters, golf courses, school grounds, airports and cemeteries. Discussion is in textbook form, with bibliographical references at the end of the short chapters.

These books and others on horticultural subjects are available at the publishers' prices through the

AMERICAN NURSERYMAN

343 S. Dearborn St.
Chicago 4, Ill.

INJURED FRUIT TREES.

Because of the unusual amount of injury to fruit trees by rabbits during the past year, treatment for injured trees was briefly discussed by C. W. Ellenwood in the March-April issue of the bimonthly bulletin of the Ohio agricultural experiment station, at Wooster.

The treatment of injured trees varies with the age and kind of tree. Where the injury is only slight and girdling is not complete, a covering of a wound dressing, grafting wax or lead paint may be sufficient to prevent drying out and to encourage healing. Where apple trees 3 years or more old have been completely girdled, bridge grafting may be used to save the trees. Bridge grafting should also be used where larger apple trees have been more than half girdled, in order to hasten recovery. Bridge grafting is not used on peach trees, and it is not very useful on apple trees less than 3 years old.

Where complete girdling has occurred on young apple trees or peach trees well above the bud or graft, it is frequently possible to salvage the tree by cutting it off immediately below the injury and developing a new top. This treatment, of course, retards the growth of the tree, but usually a new tree can be developed faster than by replanting with a young tree.

Girdling by mice beneath the surface of the ground usually renders bridge grafting or other corrective measures difficult. In such cases, it is sometimes necessary to set a young tree alongside the older tree and in-arch the top of the young tree into the older tree well above the wound by grafting.

VETERANS' TRAINING.

Special courses in arboriculture, nursery management, plant propagation and landscape gardening will be offered to any World War II veteran eligible for such training, according to announcement of the department of horticulture at Ohio State University.

These special courses are in addition to the established 4-year and 2-year courses in horticulture. The program is described in detail in the issue of "Nursery Notes" issued by the department under date of May, 1945. The educational provisions of the "G. I. bill of rights" are also described. Such benefits are obtained by veterans through application to a regional office of the Veterans' Administration, to be found in the principal cities of the country.

WANT ADS

Help and Situation Wanted and For Sale advertisements.

Display: \$2.50 per inch, each insertion. Liners: 20¢ line; minimum order \$1.00.

NURSERY FOR SALE

Opportunity to buy well stocked, money-making concern. Well established business, started 17 years ago by present owners. Located south of the Ohio river but not in the deep south. Winter temperature usually reaches zero to 5 below. Property just outside good town of 15,000 population.

This business includes 135 acres of good land, 2 modern residences, 2 tenant houses, 2 large barns, 1 stable, 3 garages, 1 propagating greenhouse, tools and cultivating equipment and 50 acres of first-class young nursery stock. 35 acres of this stock is evergreens, the balance in shade and flowering trees and shrubs. There will be between 15,000 and 20,000 salable-size evergreens available this fall, with similar amounts reaching salable sizes for the next 4 years, from stock already growing in the nursery. The present owners have been doing about 90 per cent wholesale and 10 per cent retail business, and the stock is well balanced for the department store and sales yard trade.

This property should be ideal for an established northern nursery, giving it a southern branch to produce stock for early spring trade. Would also be fine for owner of sales yards or distributor to department stores, assuring them of a supply of popular evergreens for the next few years while stock is scarce and demand is great. The net profit on plants now growing in this nursery should more than pay for the entire proposition.

To anyone really interested and with sufficient cash to purchase this business, we will be glad to furnish any information. Curiosity seekers will please save our time as well as their own.

Address Box No. 350, American Nurseryman,
343 S. Dearborn St., Chicago 4, Ill.

HELP WANTED

Experienced propagator to take complete charge of propagation from hardwood cuttings, softwood cuttings and from seeds of perennials and general nursery stock in greenhouse and outside frames, for a large, dependable midwestern wholesale nursery.

State experience, age and salary expected.

Address Box No. 349, care of American Nurseryman.

HELP WANTED

Gardener to take full charge of garden, lawns, trees, etc., on estate, which is on farm about 4 miles north and 1/2 mile west of Rochelle, Ill. Rochelle is located about 75 miles due west of Chicago. Housing quarters for man and wife or for single man. Can use wife as cook.

O. J. CARON

324 S. Second St.,

Rochelle, Ill.

HELP WANTED

Reliable nurseryman with executive ability for large old established city nursery. Exceptional opportunity for an active experienced man. Also a good opening for nursery greenhouse operator.

MALMO NURSERIES
Seattle 5, Wash.

HELP WANTED

Experienced Perennial Propagator to take complete charge of greenhouses and growing of large quantity of perennials. Opportunity for the right man. Specify experience, age and salary expected.

Address Box No. 346, care of American Nurseryman.

FOR SALE

100-acre nursery. Acres in spruce, pines, hedges, shrubs and shade trees. Modern home, tenant house, barns, sheds. Large warehouse on C. M. & St. P. R. R., with office and salesrooms. Privately owned and operated for 30 yrs. Well located on good highways. In prosperous farming community and convenient to Madison. South central Wisconsin.

JOHN R. LEATHERMAN
421 Oak St., Baraboo, Wis.

FOR SALE

Florists' and nursery business, est. 16 yrs., east central Ill., large town. Opt. man and wife only. \$8,000 net year. Greenhouse, shop, apt. and 5 acres, highway intersection. Price, \$20,500, \$15,000 cash. Wish to retire. Do not write unless you mean business. Address Box No. 351, American Nurseryman.

WANTED

Nursery or Landscape Business in Metropolitan New York or New Jersey area. Will buy immediately. State details.

Address Box No. 347, care of American Nurseryman.

WANTED

Toro Power Lawnmower.

Also Briggs and Stratton Motor, 4-cycle. State details, cost of crating and price.

MARTIN OLSEN
18633 Hubbell, Detroit 31, Mich.

CLASSIFIED ADS

Five lines, \$1.00,
each additional line 20 cents,
per insertion.

BERRY PLANTS

STRAWBERRY PLANTS, certified by state department of agriculture. Grown on new land. We are now booking orders for fall 1945 and spring 1946 as follows: Missionary, Blakemore, Kionmore, \$7.50 per 1000; Ambrosia, Premier, Dunlap, Tenn. Beauty, \$8.50 per 1000; Gem Everbearing, \$12.50 per 1000; Minnesota 1156 Everbearing, \$15.00 per 1000. Due to the small planting of strawberries this spring, there will be a short crop of plants for the coming planting season. 20 per cent deposit assures you plants at the proper time.

ROMINES PLANT FARM, Dayton, Tenn.

NORTHERN SELECTED, STATE INSPECTED

Strawberry Plants: Dunlap, Beaver, Bellmar, Catekill, Premier, Dorsett, Fairfax; 25 for \$1.15; 50, \$1.85; 100, \$3.25; 250, \$14.50. Gem, Mastodon; 25, \$2.10; 50, \$3.80; 100, \$6.15. Latham, Viking Raspberry Plants; 10, \$1.50; 25, \$3.50; 100, \$13.50, prepaid.

BRULE VALLEY NURSERIES, Brule, Wis.

CONCORD GRAPES

2-yr., No. 1, individually wrapped and labeled, ready for counter trade; \$15.00 per 100. Packed 100 vines per case. Cash with order.

D. RUSCONI SEED CO.
124 W. 6th St. Cincinnati 2, Ohio

EVERGREENS—Lining-out

2000 American Arborvitae, S.	Each	
5 to 16 ins.	.....	\$0.03
1000 Yellow Pine, S., 3-yr.		
8 to 12 ins.	.....	.03
500 Scotch Pine, S., 4 to 6 ins.	.....	.04
5000 Colorado Blue Spruce S., 4-yr.		
6 to 12 ins.	.....	.04
500 Austrian Pine, S., 12 to 20 ins.	.....	.03
1000 Banksiana Pine, 12 to 22 ins.	.....	.03
2000 Norway Spruce, T., 7-yr.		
12 to 24 ins.	.....	.15
500 Mugho Pine, T., 7-yr., 12 ins.	.....	.15
500 Scotch Pine, T., 12 to 22 ins.	.....	.15
400 Austrian Pine, T., 7-yr.		
12 to 24 ins.	.....	.15
600 Yellow Pine, T., 7-yr., 2 to 3 ft.	.....	.22
500 White Spruce, T., 7-yr.		
12 to 15 ins.	.....	.15
R.C. from greenhouse benches	.....	.07
Junipers, Taxus, Retinosporas		
200 Julianae Barberry, R.C., f.g.	.....	.15
500 Euonymus, R.C., flats	.....	.10
Small leaf, big leaf and upright.		
Cash please. Prompt shipment or will refund money if sold out.		
Order a few and be convinced of values.		

FISCHER NURSERY

Box 36, Bakerstown, Pa.

WE WILL HAVE FOR FALL SHIPMENT:
MUGHO PINE (dwarf-type), 2-yr. seedlings. COLORADO BLUE SPRUCE, twice transplanted, selected for blue color.

Also, 4-yr. transplants in SCOTCH PINE, DOUGLAS FIR, JUNIPER and BALSAM FIR.

Prices cannot be quoted before August, but buyers especially interested in any item might benefit themselves by making an offer. BRADEN NURSERY, South Windham, Me.

COLORADO SILVER JUNIPER	Per 100	
(Juniperus scopulorum)	.....	\$10.00
JUNIPERUS MONOSPERMA	.....	10.00
PINYON PINE (Pinus edulis)	.....	10.00
ROBERTS NURSERIES, Englewood, Colo.		

HARDY PLANTS

PERENNIALS.

	Per	Per
Strong, 1-yr., field-grown	100	1000
Campanula medium, dbl., mixed	\$2.50 \$21.00
medium, single; rose, dark		
blue, mixed	2.50 21.00
calycanthema, white	2.50 21.00
Delphinium, Bellamosum	2.50 21.00
Belladonna	2.50 21.00
Cliveden Beauty	3.50 22.00
Digitalis, Giant Shirley, mixed	2.50 21.00
Lobelia cardinalis	3.50
Lupine, mixed	3.50
Russell	4.00 37.00
Lychnis chalcedonica	2.50 21.00
Rudbeckia purpurea	2.50 21.00
Shasta Daisy, Mrs. C. L. Bell	2.50 21.00
Conqueror	2.50 21.00
Sweet William, dbl., mixed	2.50 21.00
NOVOTNY GARDENS, Osage, Ia.		

GRANDIFLORA HYBRID GAILLARDIA

PLANTS

500 field-grown.

\$8.00 per 100.
NORTH POLE NURSERY
Cornucopia, Wis.

HARDY MUMS AND CHRYSANTHEMUMS.

Mixed colors, 300 for \$1.00.

Rooted heavy stock.

Orders promptly filled.

WM. E. WENTZELL NURSERY, Sewell, N. J.

VINCA MINOR

Bowles variety, 6 to 12 ins. Many runners.

Excellent growth. \$10.00 per 100.

SYLVANIA NURSERY & FEAT CO.

New Galilee, Pa.

SEEDS

PEACH PITTS. Southern Collected.

High germination; \$3.00 per bu.

Peach, Plum, Apricot; 1-ft., 20c; 2-ft., 30c;

3-ft., 40c; 4-ft., 50c; 5-ft., 60c; 6-ft., 70c.

Cash with order.

RIVERDALE NURSERIES, Riverdale, Ga.

SHRUBS AND TREES

Send for new Spring list of ORNAMENTAL TREES, SHRUBS and EVERGREENS, both liners and whip-grade stock.

THOMAS B. MEEHAN CO.

Dresher, Pa.

VEGETABLE ROOTS

VEGETABLE PLANTS from South Jersey—Home of Vegetables. 1-yr. Washington Asparagus roots, \$10.00 per 1000. Tomatoes, early and late Cabbage, yellow and red Sweet Potatoes, Celery, Cauliflower, Peppers, Eggplant, Brussel Sprouts, Onion plants, Broccoli, Lettuce, Beets, Herbs, Mint, Sage, Tarragon and Chives. Whole Rhubarb roots, \$5.00 per 100.

WARREN SHINN

Root Specialist Woodbury, N. J.

SUPPLIES

BAMBOO CANE STAKES

DYED GREEN—Pencil Thickness

	Contents	Price
	Per Bale	Per Bale
***3 ft.	.....2000	\$11.00
***2 1/2 ft.	.....2000	13.55
***2 ft.	.....2000	15.55
***3 1/2 ft.	.....2000	19.50
4 ft.	.....2000	22.30
4 1/2 ft.	.....2000	24.60

NATURAL COLOR—Medium Heavy

***2 ft.	.....1000	\$ 8.25
***2 1/2 ft.	.....1000	11.50
***3 ft.	.....1000	13.50
***4 ft.	.....1000	17.00
5 ft.	.....500	11.50
7 ft.	.....150	6.00
8 ft.	.....100	5.00

NATURAL COLOR—Extra Heavy

4 ft.	.....500	\$15.50
5 ft.	.....250	13.00
6 ft.	.....200	12.50
7 ft.	.....150	11.00
8 ft.	.....100	8.50

F.O.B. New York and Chicago. Bale lots only.

*These sizes available for prompt shipment from New York.

*These sizes available for prompt shipment from Chicago.

***These sizes available for prompt shipment from both New York and Chicago.

Quantity discounts: 10 bales up, less 5 per cent. 25 bales up, less 7 1/2 per cent.

McHUTCHISON & CO.

95 Chambers St. New York 7, N. Y.

WOOD PLANT BANDS.

Used by the largest growers of Carnations, Snaps, Stocks, perennial plants and all plants to be transplanted in the greenhouse or outdoors. Get your supply now, also, for Vegetable plants for resale.

	Size in ins.	Weight	Per
		per 1000	1000
No. M-310	1 1/4 x 1 1/4 x 2 1/2	.....12 lbs.	\$2.95
No. M-320	2 x 2 x 2 1/2	.....18 lbs.	3.30
No. M-340	2 1/2 x 2 1/2 x 3	.....20 lbs.	3.75
No. M-350	3 x 3 x 3	.....21 lbs.	4.10
No. M-360	3 x 3 x 4	.....32 lbs.	4.75
No. M-391	4 x 4 x 4	.....40 lbs.	5.60

Packed 1000 to the carton.

We do not break the carton.

LIGHT WOOD FLATS.

Suitable only for holding and shipping our Wood Plant Bands. Bands are not included at prices below.

	Per 100 flats
M-370, holds 12 1 1/4-in. bands	.....\$2.75
M-390, holds 12 2-in. bands	.....3.30
M-392, holds 12 2 1/2-in. bands	.....3.75
M-393, holds 6 3-in. bands	.....3.35
M-394, holds 6 4-in. bands	.....3.95

Packed 100 to the carton. We do not break cartons.

AMERICAN BULB CO.

1335 W. Randolph St., Chicago 7, Ill.

31-37 W. 27th St., New York 1, N. Y.

WINDOW BOXES.

Galvanized Iron.

27 ins. 6 1/4 ins. deep x 4 1/4 ins.40c

They make good nut and bolt boxes.

Samples, including postage, 60c.

MARYLAND NURSERY, Edmonston, Md.

GIBLARTAR Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks, 6 ft. wide; 50 ft., \$13.75; 100 ft., \$26.00; 150 ft., \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

UNIVERSAL NURSERYMAN'S TOOLS

Immediate Shipment!

Overnight by air to anywhere U.S.A.

Rigid Pipe Wrench	Ball-peen Hammer
Channellock Pliers	Plastic Screwdriver
Adjustable Wrench	Waterpump Pliers
CEETEE Pliers	Hacksaw and Blade
Diagonal Cutters	Cold Chisel

\$19.85—A Dandy 10-piece Set

UNIVERSAL TOOL CO.

1527 Grand, ANM Kansas City, Mo.

Also Uniform Cap, Pants and Shirt, \$9.85 set. Price list, order blank free. REMEMBER: We have it, can get it, or it isn't made. Remit with order, TODAY.

BUDDING STRIPS

Made of synthetic rubber; 4, 5 and 6-in. lengths. Packed 5 lbs. in bags, 10-lb. lots, \$1.25 per lb., 50-lb. lots, 90c; 100-lb. lots, 80c; 500-lb. lots, 70c per lb. Prices subject to change. Samples gladly furnished. Please favor us with your order or inquiry.

THE M. CONLEY CO. Canton 1, Ohio

RAIN SUITS.

Protect your help—work in the rain. Wear Conley's Rubber Jackets at \$3.75; Rubber Overalls, \$3.75; Hood Cape Hats, 90c; Squam Rain Hats, 75c. Thousands of nurserymen and florists wear them. Samples sent on approval. Advise sizes.

THE M. CONLEY CO. Canton 1, Ohio

FLATS—ASSEMBLED

SAVE LABOR, TIME, MONEY

18x6 1/2 x 4 1/220c

(Samples, including postage, 35c)

Good for nut and bolt boxes.

MARYLAND NURSERY, Edmonston, Md.

COTTONETTE Squares are best for balling. Saves time and twine. All sizes in stock. Write NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

Surplus Stock

can be easily and quickly turned into

Cash

listing it in the

American Nurseryman Classified Ads.

WANTED

WANTED

85 Taxus intermedia (Hybrid Yew), 3 to 4-ft. spread, B&B.

865 Ampelopsis tricuspidata low! (Geranium Ivy), 2 or 3-yr., 3-runners (P) roots.

275 Euonymus radicans, 2 to 3-yr.

70 Cercis canadensis (American Redbud), 6 to 8 ft., B&B.

C. R. PETERSON

6394 Rosemont Detroit 10, Mich.

WANTED

AZALEA MUCRONULATA

in quantity.

BROOKVILLE NURSERIES

Glen Head, N. Y.

CATALOGS WANTED

On garden tools, seeds, nurseries, sprayers and hose.

ANDREW LASKO SEED STORE

20142 W. Warren, Detroit 10, Mich.

MANETTI STOCK WANTED

for bench grafting next winter.

If quoting, specify quantity available.

E. D. SMITH & SONS, LTD.

Winona, Ont., Canada

MISCELLANEOUS

FRESH MARY WASHINGTON ASPARAGUS SEED, 6 lbs., \$8.75. Hardy rooted MUMS, 400 for \$15.00; assorted colors. Phlox subulata, 300 for \$15.00.

WM. E. WENTZELL NURSERY, Sewell, N. J.

GRASS SODS delivered anywhere.

LAUREL NURSERY

188-19 Merrick Rd.

Springfield Gardens, L. I., N. Y.

MORE PROSPECTS

mean better prices and larger sales.

You can get them by

advertising stock in

AMERICAN NURSERYMAN

343 S. Dearborn St. Chicago 4, Ill.

New Books and Bulletins

CAMELLIA COLOR PLATES.

The handsome book on camellias published by G. G. Gerbing two years ago, at \$15 per copy, has just been reprinted. In addition, with the support provided by that undertaking, Mr. Gerbing is now bringing out a series of color plates, 8x12 inches in size, each with descriptive notes, which are contained in a handsome imitation leather loose-leaf binder.

The plates are actual size, showing in most instances a full-blown flower and bud, with an abundance of foliage. The binder will accommodate 125 full-page color plates, which are printed on 120-pound enamel paper.

At present is available a set of thirty-seven plates together with the loose-leaf binder at \$10 for the set. Of the thirty-seven plates in this set, thirty-five are new varieties not shown in the book, "Camellias," while two are improved plates of varieties shown in that volume.

The color plates are large enough for framing, and a set of thirty-seven is available at \$5 for the set.

WEEDS.

The characteristics and habits of 175 weeds and ways to combat them are described in "Weeds of Lawn and Garden," by John M. Fogg, Jr., professor of botany at the University of Pennsylvania. Just published by the University of Pennsylvania Press, at \$2.50, this handbook is designed especially for the amateur, who frequently mistakes weeds for carefully planted vegetables or flowers, particularly in their seedling stage.

The illustrated section forms the bulk of the book's 216 pages. In it the weeds are arranged by botanical families, but are featured by their common names. Below the half-page sketch of each weed are given the botanical designation of the plant, its geographic origin, its manner of growth and methods of eradication.

A sizable introduction discusses what a weed is, why some plants are weeds, the origin of weeds, the dispersal of weeds, chemical controls and weeds as soil indicators.

BROOKLYN QUARTERLY.

"Plants and Gardens" is the title of a quarterly magazine just started by the Brooklyn Botanic Garden, with Montague Free as editor. The first issue, of sixty-four pages and cover, is well illustrated and contains

several interesting articles by members of the garden staff. Chief among these and occupying thirty-four pages is an illustrated article on "Shrubs for Special Uses," by Charles F. Doney, who gives a paragraph of description about each of a number of individual plants for acid soil, wet soil, seashore, sandy soil, ground covers, dry soil, shade, city conditions, hedge plants, fragrant flowers, showy berries, long blooming period and, finally, uncommon shrubs.

IDENTIFYING PEAR TREES.

The sixth in a series on nursery identification of fruit varieties is bulletin 421 of the Massachusetts agricultural experiment station, Amherst, on "The Identification of Pear Varieties from Nonbearing Trees," by Lawrence Southwick, A. P. French and O. C. Roberts.

Identification of varieties in the orchard row is just as feasible and positive as identification in the bearing orchard. The important advantage of identification by plant characters, instead of by fruit characteristics, is that the variety mixtures, which occur for one reason or another more or less frequently in commercial nurseries, can be detected and corrected before the trees are dug.

In fifty-two pages this booklet records in words and pictures much of the information necessary to distinguish pear varieties from one another.

other. Forty-seven varieties are described and forty-one of these are illustrated. A few pages are devoted to the general characteristics of stems and leaves, but most of the booklet contains illustrations of upper portions (approximately two feet) of one-year shoot growths, with the prominent characteristics of each listed on the opposite page. A table of variety comparisons, a variety key and detailed descriptions of each variety complete the information.

STARTING PARK ARBORETUM.

In response to numerous requests, information about establishing a park arboretum as a living war memorial is presented in the May 18 issue of *Arnoldia*, the bulletin of popular information of the Arnold Arboretum, Jamaica Plain, Mass. In the twenty-four pages of the bulletin, Donald Wyman covers briefly but thoroughly the important considerations which local groups need to recognize in undertaking a combination park and arboretum as a living war memorial. This bulletin should be brought to the attention of any citizens' group contemplating such a project.

Send for New Seed List.

A. B. C.

"Supreme" Quality

SEEDS — PLANTS — BULBS

and

Growers' Accessories

AMERICAN BULB CO.

1335 W. Randolph St. CHICAGO 7
31 W. 27th St. NEW YORK 1

AMMATE

(DuPont's)

WEED KILLER

Controls poison ivy and other noxious weeds. Keeps walks and roads clean with little trouble. Nonpoisonous — fire-retarding — clean — odorless.

2 lbs.....	\$ 0.75
10 lbs.....	3.00
50 lbs.....	12.00

Also available in 350-lb. barrels.

SOMERSET ROSE NURSERY, INC.

P. O. Box 608, New Brunswick, N. J.

RELiance

AZALEA and CAMELLIA SPECIAL

PLANTFOOD

Specifically Designed For

Azaleas	Magnolias and	Camellias
Tea Oilies	GARDENIAS	Kalmia
Rhododendrons		Hollies

Used and Recommended by Leading Nurseries

Sent upon request, cultural booklet on AZALEAS and CAMELLIAS.

Manufactured by

The Reliance Fertilizer Co.

Savannah, Georgia

PEACH PITS

THE

Howard-Hickory Company

Hickory, N. C.

PEACH PITS

The South's Largest Collectors of Planting Peach Pits for 25 years.

HOGANSVILLE NURSERIES

Hogansville, Georgia

North Dakota and Montana Seeds

Northern-grown Tree, Shrub and Wild Flower seeds. Wholesale crude botanicals.

E. C. MORAN

Stanford, Mont.

SPRING REPORTS.

[Continued from page 10.]

or only slightly increased, on ornamentals. Fruit trees and roses were in great demand, and the fact that a little bundle of fruit trees brought right many dollars helped the dollar volume considerably.

"As to maintaining a continuing supply of stock for the next two years, we have been propagating more or less our usual amounts of stock and have finally succeeded in lining out about the usual quantity. We are wondering how we are going to take care of it.

"We believe there will be a good demand for both fruit and ornamental stock for at least several years to come and have an idea that the supply is going to be below the demand, until stocks can be rebuilt again."

Strong Demand in Georgia.

The same heavy demand in the face of help shortage made it necessary to decline orders over a period of forty days at the Fruitland Nurseries, Augusta, Ga., states J. G. Bailie, who reports as follows:

"We are in the same boat with everybody else, having more business than we could possibly handle. We had the stock, but did not have enough labor to dig and pack the material wanted. We were compelled to stop accepting orders for forty days, due to the fact that they were coming in much faster than we could get them delivered.

"People did not seem to question prices at all and in some cases said they thought the prices were too low, which we think is something unusual in dealing with the public.

"The demand for fruit trees this year was the largest we have ever had, and we believe this will continue for another year at least.

"As far as labor is concerned, as soon as the men start returning from the war we believe the labor situation will be relieved to a certain extent. We do not anticipate, however, any great easing up until final victory in Japan."

Hectic in Maryland, Too.

The weather and a strong demand made spring a hectic season likewise in the experience of the Westminster Nurseries, Westminster, Md., and C. Willard Stoner writes:

"This season has been a hectic one. We experienced an unusual spring by having two weeks of normal May weather in March, which forced shade trees and deciduous shrubs into full foliage in a period of ten days' to two weeks' time. With little



WE ARE NOW Offering
a Limited Number of our
NURSERY HAND TRUCK
It will help to solve your
labor problem.

Price, complete with Balloon Tires,

\$35.00 F.O.B. Kansas City

*Sound Business Management looks ahead. We
suggest you order now for Spring Requirements.*

THE GARDEN SHOP, Inc.

4819 Mission Rd.

Kansas City, Kan.

Mention The American Nurseryman when you write.

Starter-Fertilizer, Root Tonic, Plant Food — Combined!

Better Transplants Faster Growth

WITH THIS new kind of starter-fertilizer, you'll cut transplanting losses, whether moving flowers, vegetables, or shrubs and trees. And you'll get better vigor, if MANNA-fed, from plants that are not moved. It's that kind of an all 'round plant stimulant.

MANNA combines the feeding and starting values of the primary nutrients with hormones and vitamins to cushion root shock and shorten wilting—plus the important minerals and trace elements to cancel deficiencies and make healthier plants and richer, finer, EARLIER vegetables . . . all in a single product . . . at a cost lower than for transplanting solution alone!

HIGHLY SOLUBLE and COMPLETE, MANNA grows plants in sand, soil or water! Supplied in handy pellets—no muss, fuss or measuring. No burning!

IN TRANSPLANTING, use MANNA on soil around roots. Or soak bare roots 1 to 12 hours before planting. Used when moistening propagating beds, aids rooting and growth vigor. (Will siphon into hose or sprinkler system.) For seeded crops, used either direct in soil or as liquid fertilizer.

M A N N A

1000-pellet unit makes 500 to 2000 gallons, \$6.00. Market-size trial pkg., \$1.00. FOR RESALE TO HOME GARDENERS, 25c packets, colorfully displayed. Send today for complete free literature.

MACLEAN RESEARCH,

Bridgeton 11, Indiana

A. M. LEONARD & SON

Piqua, Ohio

Tools — Grafting Supplies

Write for Bulletin.

Write for Bulletins and Lists of supplies
for nurserymen and florists

Schupp's FLORIST SUPPLY CO.

Dept. A

Wilmette, Ill.

RUBBER
SPRAY HOSE
America's Finest

Best Buy On the Market
Write for Free Sample

ALSO OTHER HARD-TO-GET RUBBER ITEMS:

RUBBER BANDS	CLOVES
V-BELTS	APRONS
WATER HOSE	RAIN CLOTHING
FINGER COTS	FOOTWEAR
TUBING	SUCTION HOSE
FRUIT GRADER BELTS	

GET OUR PRICE SHEET TODAY
BROADWAY RUBBER MFG. CO.
529 East Broadway Louisville 2, Ky.

labor available, we found it impossible to cope with the demand for our commodity. The demand for both ornamental stock and fruit trees seems to be greater than ever before, with the supply limited on fruit trees and small fruits as well as some varieties of ornamental stock. We declined orders which specified for us to deliver and do planting work. On the other hand, to move our stock with the little labor we had available we worked sometimes at nights and also on Sundays.

"We are looking ahead five or six years and have continued our propagation, but only in quantities for our own requirements. We have not offered any lining-out stock to the trade. It is our opinion that next year nursery stock will be scarcer than ever. We have inexperienced labor, resulting in poorer standards. We have experienced two successive growing seasons that were very dry, which has caused failures on some items, and other stock which should have matured and be ready for sale has not made the required growth.

"We had the benefit last fall of war prisoners, who did a good job for us. However, this spring this type of labor was not available."

Hold Volume under Difficulties.

Hard-pressed for everything but stock, the Waynesboro Nurseries, Inc., Waynesboro, Va., managed to finish the season with a record volume. E. M. Quillen reports:

"We started the spring planting season with a good stock of both fruits and ornamentals, but that was about all we did have. Our catalog was delivered two months late, the season was one month early, and we hardly had enough labor to have carried on a normal business under normal conditions. The results were that rush orders piled up late in the season in greater volume than we could either promptly book or pack, making necessary large refunds on orders we could not handle because of lack of time and labor, while the plant material stood in the field. We were doing everything possible, using prisoners of war whenever possible. We finally wiggled through, finishing up with the largest volume ever. Our customers complained some of delays and cancellations, but as a whole were considerate and patient.

"Our problems were further aggravated by an early April freeze, which killed the fruit crop and many young trees and plants, reducing supplies for the next two years.

"The labor situation continues bad, but so long as we can obtain prisoner of war labor we can manage to keep

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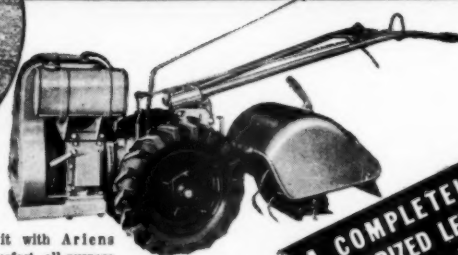
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tilling and cultivating combine for the nurseryman. It harrows as it discs as it plows—ONE operation produces a properly prepared seed bed, thoroughly aerated, with pulverized soil, shredded and evenly mixed . . . no large soil chunks to retard plant growth . . . can be operated in wet or dry seasons. To meet your requirements there are 3 models . . . complete details and name of distributor on request.

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METHYL BROMIDE

FOR NURSERY AND GREENHOUSE PLANTS
THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

going. Office help has been almost as much a problem as field and packing house labor. Our single girls would change jobs or be married and leave town without giving a day's notice, while the married ones would join their husbands in Texas or California, leaving behind vacancies which could not be filled with experienced help.

"We have had plenty orders at satisfactory prices, netting us some profit, but not any more than we feel we have earned."

TREE CAVITY CEMENT.

Hubbellite tree patching cement originally was a cement principally intended for use on locker room floors or around swimming pools to control microorganisms associated with such skin infections as athlete's foot. The fungicidal value of the cupric oxychloride content is said similarly to arrest decay in tree cavities filled with this material.

Harvey S. Crass, supervisor at Frick park, Pittsburgh, Pa., called attention to its ability to seal thoroughly so that water and air are excluded and further rot action is stopped. He said that even an unclean cavity would be dried up and any rot present would dry and harden without any progression beyond the areas affected at the time of the treatment.

Tests of cavity work now three years old indicate that it is necessary to remove only loose pulpy decayed wood in order to secure a solid contact. No dieback results when the cement is applied directly to the cambium. It adheres to the wood and does not shrink on setting. Undercutting is unnecessary. The cement is tough and resilient, so that it will conform to moderate tree movement.

The Hubbellite cement is a product of H. H. Robertson Co., a building products firm of Pittsburgh. The material is a powder that, mixed with water, becomes very adhesive, especially to wood. So long as it is kept in a tight container, so that moisture is not attracted, the cement can be kept on hand for use as required.

OLD ENGLISH FIRMS.

Correspondence about the oldest horticultural business in an English trade periodical reveals that the nurseries of Thomas Rivers & Son, Ltd., were founded at Sawbridgeworth, England, in 1725 and have been carried on uninterruptedly ever since. The firm of Wood & Ingram, Ltd., Huntington, dates back to 1747, and Samuel Finney & Co., Ltd., Newcastle on Tyne, was established in 1749, almost two centuries ago.

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Clostracide contains all the necessary chemicals for the control of fungus diseases such as black spot and mildew, such leaf eaters as rose slugs, which skeletonize the foliage, and other leaf-eating worms and insects, such as sucking insects as plant lice or aphids. Convenient to use. Effective in results. Economical in price.

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Introducing E-Z CREPED WATERPROOF—The New Nursery Wrap

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Will not support mildew, fungus or moths. Mice or vermin will not eat through it.

In 200-yard rolls 24, 36, 48 and 60 inches wide.
Sheets to your order.

Reasonably prompt delivery

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A limited quantity available for immediate shipment in 30/30/30 plain waterproof in 200-yard rolls
18, 24, 36 and 48 inches wide.

NEW SOIL FUMIGANT.

A new soil fumigant, Dowfume G, containing methyl bromide and especially toxic to nematodes, centipedes, millipedes, pill bugs and other soil-infesting organisms, has recently been put on the market by the Dow Chemical Co., Midland, Mich.

Dowfume G is easily applied by means of Mack's anti-weed gun, a hand applicator, adjustable to measure dosages from two to ten cubic centimeters. Injections of six cubic centimeters of Dowfume G at 10-inch intervals at a depth of five inches have proved the best control of undesirable soil organisms. Fumigation is most effective on a soil of medium moisture content, and immediately after injections a 1/4-inch water seal should be applied. After two days of complete aeration seeds may be planted, and four days after the treatment plants may be set in the fumigated soil.

BINDWEED CONTROL.

Extermination of bindweed by following requires cultivation for three consecutive years at intervals of ten to twelve days throughout the growing season, reports A. L. Bakke, of Iowa State College, at Ames, in bulletin P61. Sorghum, in particular, Sudan grass and millet are effective smother crops when heavily seeded for several years on bindweed-infested areas. Soybeans seeded solid, from three to three and one-half bushels per acre, for five consecutive years, given intermediate cultivations and plowed just before planting the soybeans and shortly after their harvest, will completely eradicate bindweed.

Sodium chlorate and Atlacide have been the most effective chemicals to use in eradication. Dry sodium chlorate used to eradicate bindweed must be distributed evenly for the best results. Alfalfa, sweet clover and

HYPONEX PLANT FOOD

Grows Superior Plants in Poorest Soil Sand, Cinders or Water

Used by florists, farmers and gardeners for:
FEEDING—flowers, vegetables, lawn and trees.
TOP DRESSING—soluble—plants absorb it quickly.
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This clean, odorless powder produces stronger root system with more feeding branches; greater substance in stems, more and larger flowers or fruit. Does not burn roots or foliage when used in solution form as directed.

Sell HYPONEX to your customers for their gardens and house plants. Nationally advertised.

1-oz. pkg. retails 10¢—packed 72 to case.
3-oz. can retails 25¢—packed 36 to case.
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Also in 16, 25, 50 and 100-lb. drums.
Write jobber or us for dealer and grover prices.
Buy from your jobber or send 10¢ for 1-oz. sample (makes 6 gallons) or \$1.00 for 1 lb. (makes 100 gallons). Dollar credited on first order for 1 case for resale or drum for your own use.

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CRYSTAL BORER REPELLENT
For most species of borers on deciduous trees. Apply as protective measure. Used by leading tree companies.

CRYSTAL NO-DRI
A scientific wax emulsion. Can be applied with spray equipment. Retards and reduces loss of moisture. Permits transplanting out of season.

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Use 1 part with 25 to 40 parts of water

Ask your nearest seedman, or
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SUDBURY PORTABLE SOIL TEST LABORATORY

The most valuable piece of equipment you can own, giving you the soil information that you need for efficient production. Widely used by estates, professional growers and government field stations. Will last almost a lifetime with refills. Comes in instrument type, solid mahogany case. No chemistry knowledge required. Complete with instructions and helpful chart. SEND NO MONEY. Order C.O.D. \$22.50, plus express charges (or send \$22.50 and we pay express). Money back guarantee.

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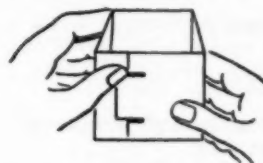
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Send your order now.

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CAT.	Size in inches	Weight per 1000	Per 1000
No. M-310	1 3/4 x 1 3/4 x 2 1/2	12 lbs.	\$2.95
No. M-320	2 x 2 x 2 1/2	15 lbs.	3.30
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No. M-360	3 x 3 x 4	32 lbs.	4.75
No. M-391	4 x 4 x 4	40 lbs.	5.60

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AMERICAN FLORIST SUPPLY CO. CHICAGO 7 1335 W. Randolph St.

flax are tolerant of sodium chlorate, while soybeans are extremely sensitive. Ammonium sulphamate applied as a spray is also effective with bindweed.

In bluegrass lawns European bindweed may be eradicated by using sodium chlorate as a spray or placed in holes, or by injecting the soil with tetrachloroethane. Bindweed in new lawns should be eradicated before the soil fills and plantings are made.

FUMIGATION TESTS ON EVERGREENS.

Tests by R. Latta and A. C. Johnson, of the United States Department of Agriculture, on seven varieties of coniferous nursery plants in Virginia, Maryland and Delaware for their tolerance to methyl bromide fumigations employed against Japanese beetle larvae showed a definite relationship in six of them between the extent of injury and the season when treated, it was reported recently in the Journal of Economic Entomology. Those fumigated during the late winter, when apparently least active, exhibited no foliage injury, but severe damage resulted when they were treated during late March and April as they were breaking dormancy. Though the amount

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of foliage injury from spring fumigation differed for each variety, the same trend was apparent in all six varieties. The seventh variety, Colorado spruce, was severely injured in all tests, but in this case the dormant period probably ended before initiation of the tests.

Japanese yew and Goldplume Sewara false cypress were selected for fumigation tests between April, 1941, and May, 1942, at Beltsville, Md. In this series a tolerant period was evident between December and February, preceded and followed by periods where foliage injury occurred. Since

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Book A. Illustrates in full color 235 standard nursery items, brief description, substantially bound. Price in small lots, 75c each.

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A pocket-size 48-page booklet. Very complete but concise information, well illustrated. Helpful in preventing claims for dead stock that cost nurserymen money. Sample, 10c. Write for discounts on quantities.

Will send sample copy of each of the above on receipt of \$1.00. Cash with order.

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ELYRIA, OHIO

Immediate shipment on plain labels up to 25,000. Write for price list.

MARKHAM'S OHIO NURSERY, Elyria, Ohio

the period of lowered tolerance in both fall and spring tests occurred at the same time as normal nursery stock movement, it is believed that injury to commercial stock from fumigation has been due to the plants' being in a relatively active state.

Fumigation of coniferous evergreens in accordance with Japanese beetle quarantine schedules is thus considered inadvisable except where open weather conditions permit their treatment during the period of least activity or where specific varieties have been tested sufficiently to establish their reactions to fumigation at various seasons of the year.

CHAMPION COTTONWOODS.

One of the best known and largest trees in New York state is a specimen of *Populus deltoides*, cottonwood or eastern poplar, located at Balmville and mentioned in the historical records of the vicinity since Revolutionary times.

Although the tree is known locally as a balm of Gilead tree, it is not a *Populus candicans*, to which species modern usage restricts the name balm of Gilead, but some variety of *Populus deltoides*.

In June, 1943, the tree was measured and found to have a circumference of twenty-three feet, two inches; a height of ninety-nine feet and a spread of eighty-six feet. In 1832 its circumference was recorded as fifteen feet, two inches, and in 1868 as nineteen feet, five inches.

In the American Forestry Association's big tree campaign the champion specimen of *Populus deltoides* is recorded growing at Old Fort Kearney, Neb. It is nearly ninety feet tall and about thirty feet in circumference.

REPORT FROM BELGIUM.

Favorable reports regarding horticulturists in Belgium appear in the English trade papers. In spite of the misery, hardships and dangers of occupation, the members of the Ghent Horticultural Society and of the Chambre Syndicale des Horticulteurs Belges have continued to hold monthly meetings throughout the period of occupation. When the enemy armies were compelled to hurry out of Ghent they did a great amount of damage, setting fire to the Palais des Fêtes, in which many of the famous Ghent quinquennial shows have been held.

BECAUSE of the shortage of help, Clarence Flagstad has been forced to discontinue operating the Flagstad Nursery, Sacred Heart, Minn.

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"COTTONETTE" Nursery Squares
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Write for prices; state requirements.

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122 Chambers St. New York 7, N. Y.



The annual meeting of members will not be held this summer by the AMERICAN ASSOCIATION OF NURSERYMEN because of wartime conditions. Instead, the executive committee has decided upon a CONVENTION BY MAIL in the third week of July.



THE A. A. N. SPECIAL NUMBER of the

AMERICAN NURSERYMAN

July 15, 1945

will carry the messages of association leaders on problems of the industry, reports of committee activities and the work of the Washington office—in fact, the information presented at the annual convention of members of the association in other years.

THE OUTSTANDING ISSUE OF THE YEAR

- _____ **Four cover pages of plant pictures in full color.**
- _____ **Reference number — kept and consulted by over 5,000 readers.**
- _____ **Buyers' directory — record advertising of supplies, equipment and stock.**

Covers in full color, numerous advertisements and special editorial features make this special number prized by readers throughout the year. Plan now for conspicuous space in this number. Over 5,000 nurserymen will look for your advertisement and will see it again and again—a continuing reminder of your service, stock, supplies or equipment when needed.

GET BUSINESS BY MAIL—Because fewer salesmen are on the road and travel conditions are difficult, more and more business is transacted by mail. Advertising in the American Nurseryman so far in 1945 has exceeded the like period in any preceding year—because old advertisers used more space and more firms sought orders through its columns.

DEMAND IS STRONG—The public demand for nursery stock exceeds the physical capacity of the industry to meet it. All kinds of fruit trees and berry plants were sold out to victory gardeners intent on food. Ornamental trees, shrubs and perennials were sought by those who seek relaxation in beautifying the surroundings at home instead of in vacation travel. Shortage of labor prevented filling all the orders placed, and many will be carried over until autumn.

SAVE TIME — SAVE TRAVEL — SAVE LABOR DO BUSINESS BY MAIL

Send your advertising copy early for the big Special Number.

Advertising forms will close July 5.

AMERICAN NURSERYMAN

THE Magazine Nurserymen Everywhere READ

343 S. Dearborn St.,
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A Good Name To Remember

In Considering Your Source of Supply for Evergreens



We are looking forward to next season and will have our list of available material ready to quote about the first of July.

In the meantime, we wish to thank our many customers for the fine patronage extended to us during the season now closed.

•

D. HILL NURSERY COMPANY

Evergreen Specialists

Largest Growers in America

DUNDEE, ILLINOIS